Southern California Association of Governments

System Performance Measures

Preliminary Performance Results
June 10, 2003

System Metrics Group, Inc.

SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

Agenda

- Preliminary Preservation results
- Discussion on Sustainability
- Scenario Performance Results
  - Accessibility
    - Modified base year (2000)
    - Baseline (2030 Trend/Local A)
    - Tier2 for 2030 Trend/Local A Growth Projection
    - Tier2 for 2030 Trend/TBGP
    - Tier2 for 2030 Trend/TBGP Modified
  - Mobility
    - Scenario comparisons

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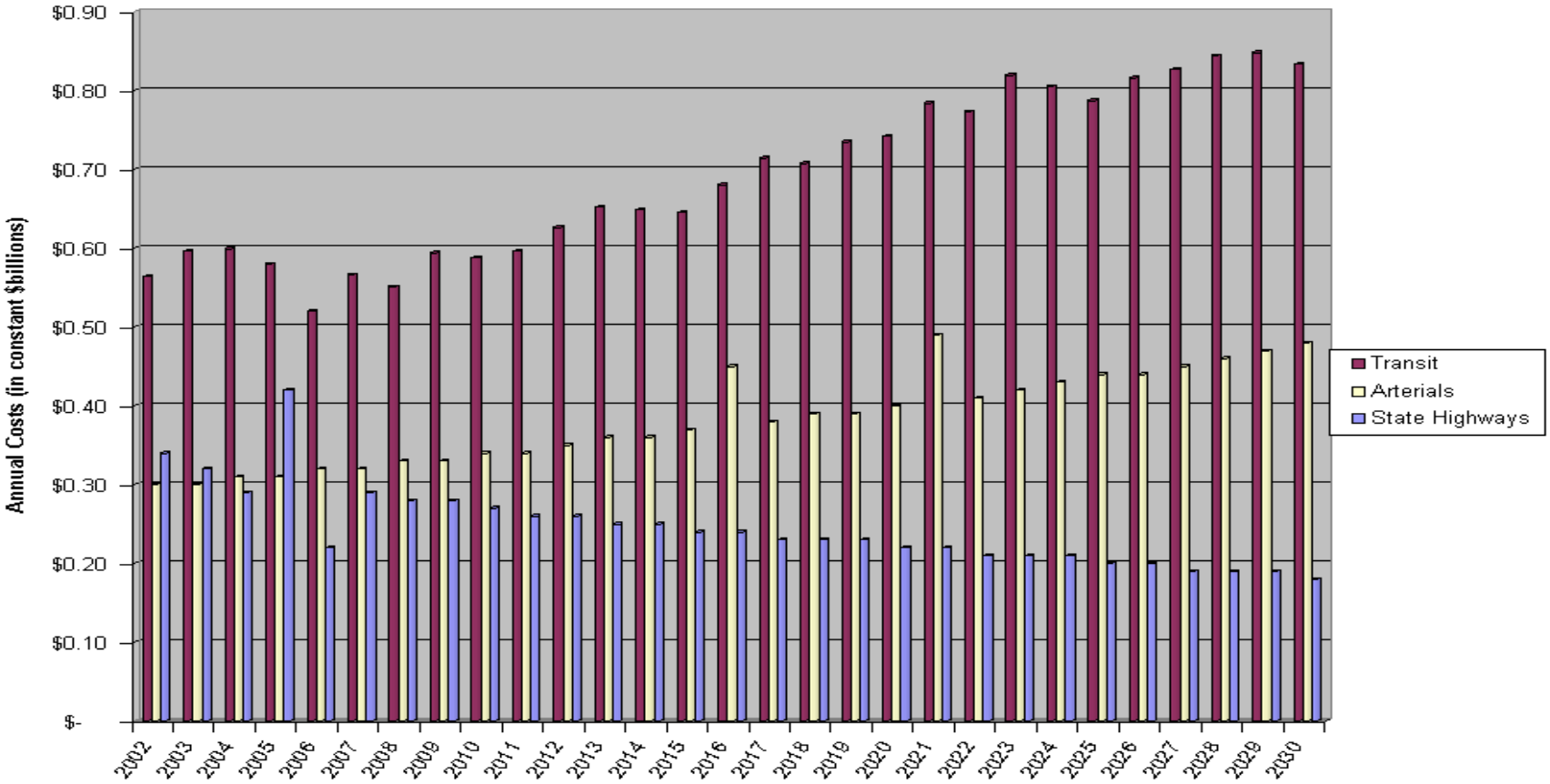
Preliminary Preservation Results

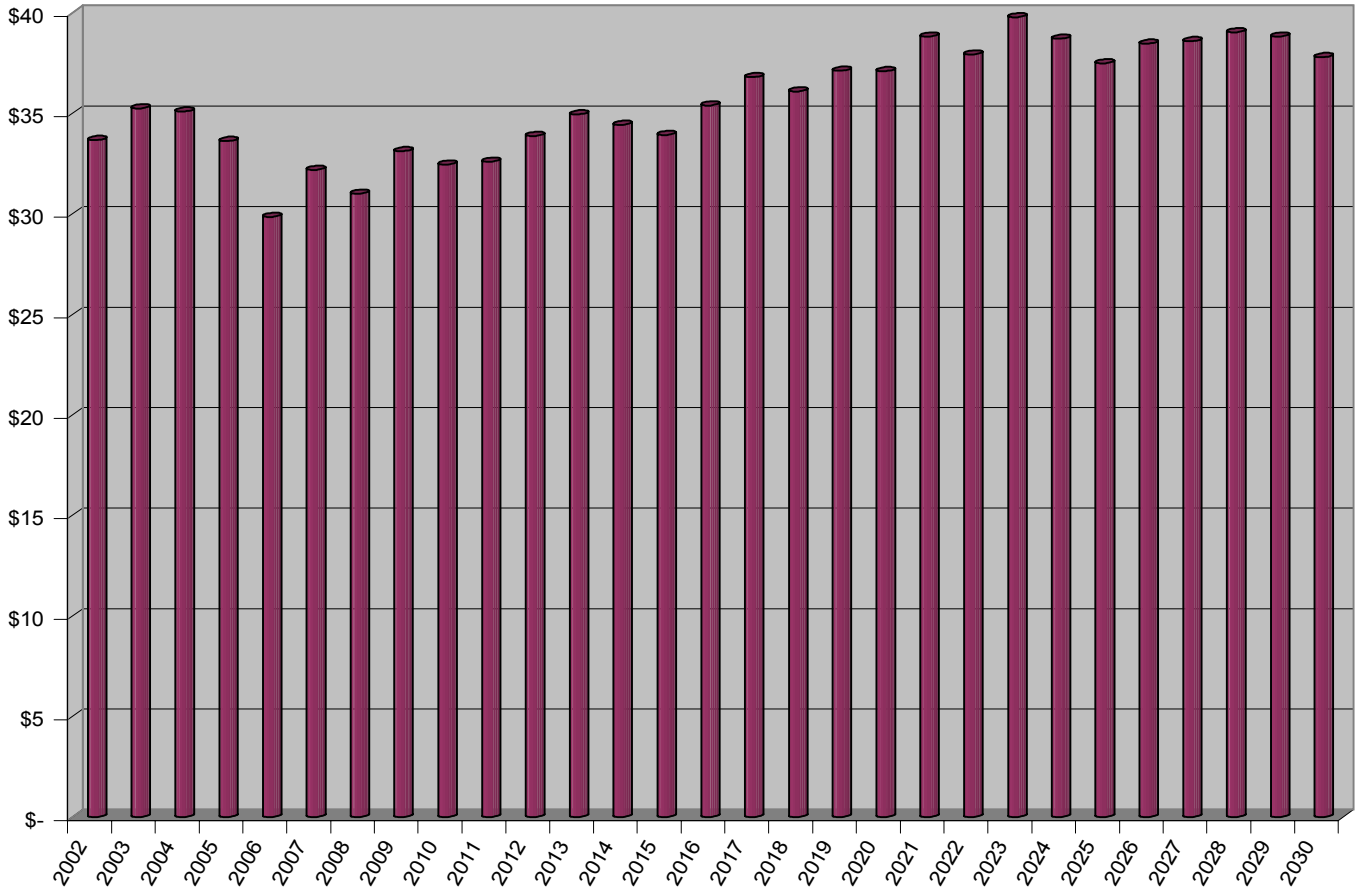
Annual Maintenance Costs by Facility Type



Preservation is calculated by dividing total maintenance costs by population

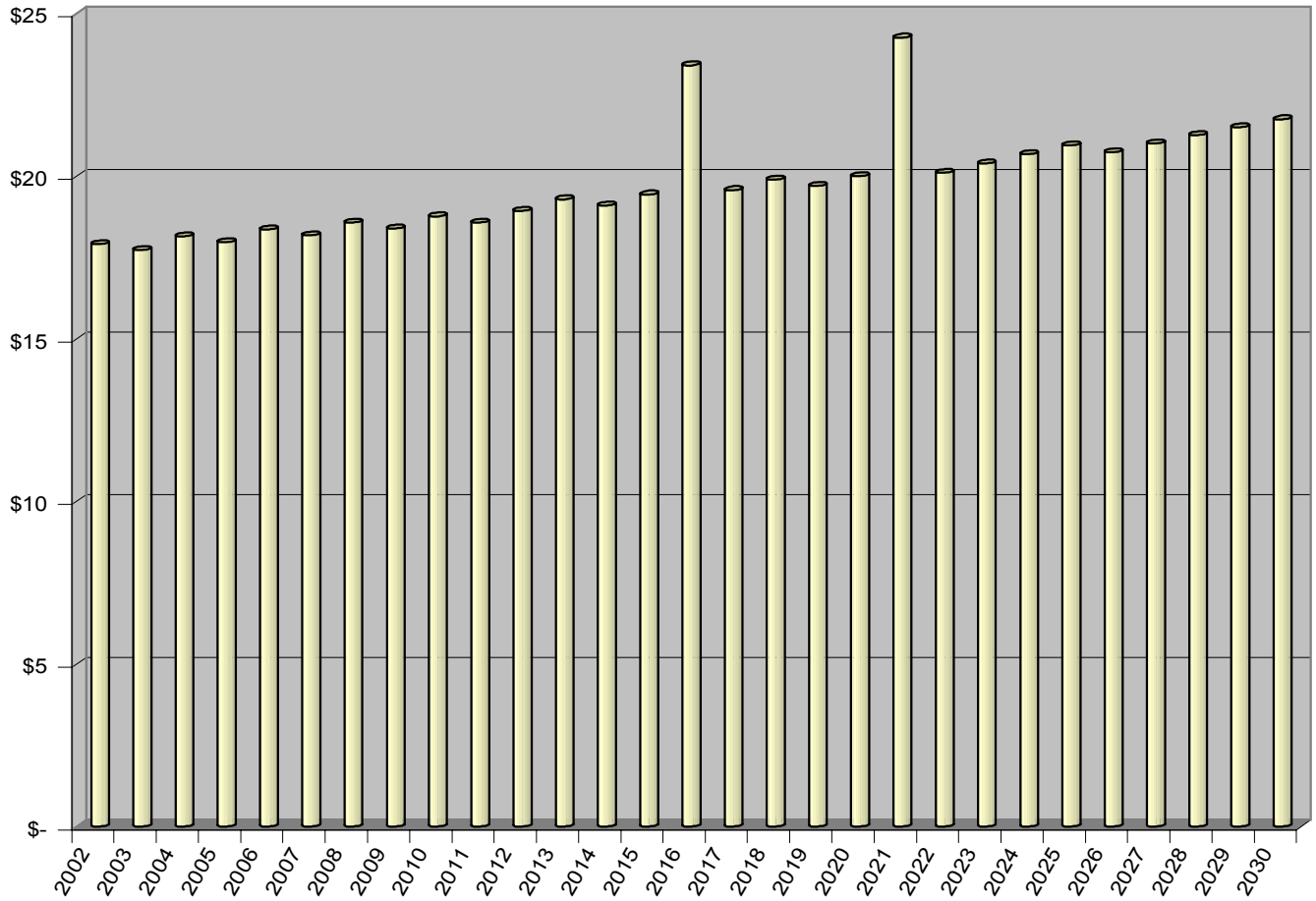
- 2000 regional population was approximately 16.5 million
- 2030 population is forecasted to grow to 22 million
- Average annual compounded growth rate is almost 1 percent
- Dividing annual maintenance costs by population gives us the preservation measure desired
- THE RESULTS DO NOT REFLECT NEEDS. THEY DO REFLECT THE EXPENDITURES BASED ON CURRENT PLANS AND REVENUE TRENDS.

Annual transit preservation ranges between $30 and $40 per capita, with an overall increasing trend over time



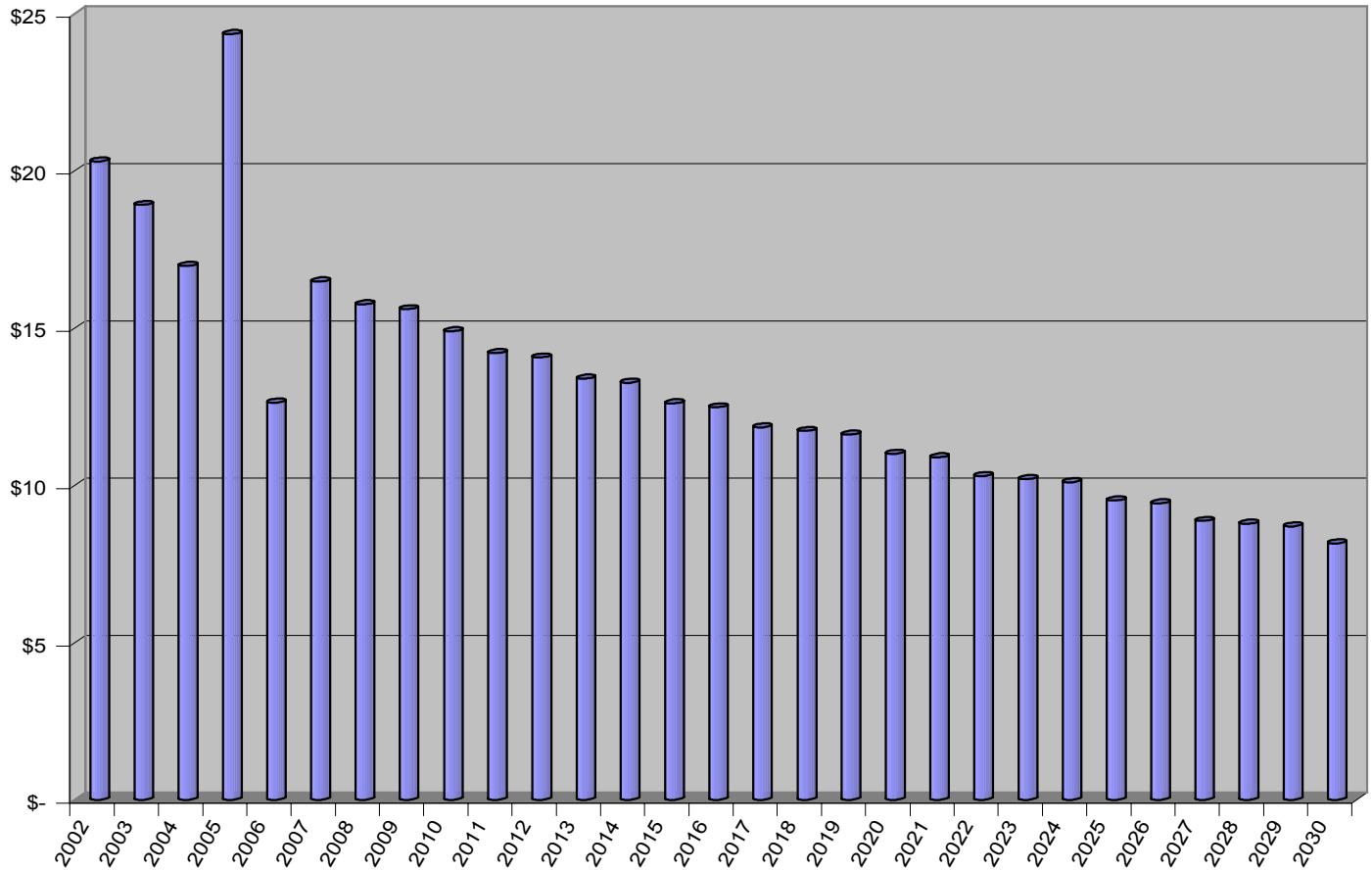
THE RESULTS DO NOT REFLECT NEEDS. THEY DO REFLECT THE EXPENDITURES BASED ON CURRENT PLANS AND REVENUE TRENDS.

Annual arterial preservation ranges between $17 and $24 per capita, also trending upwards over time



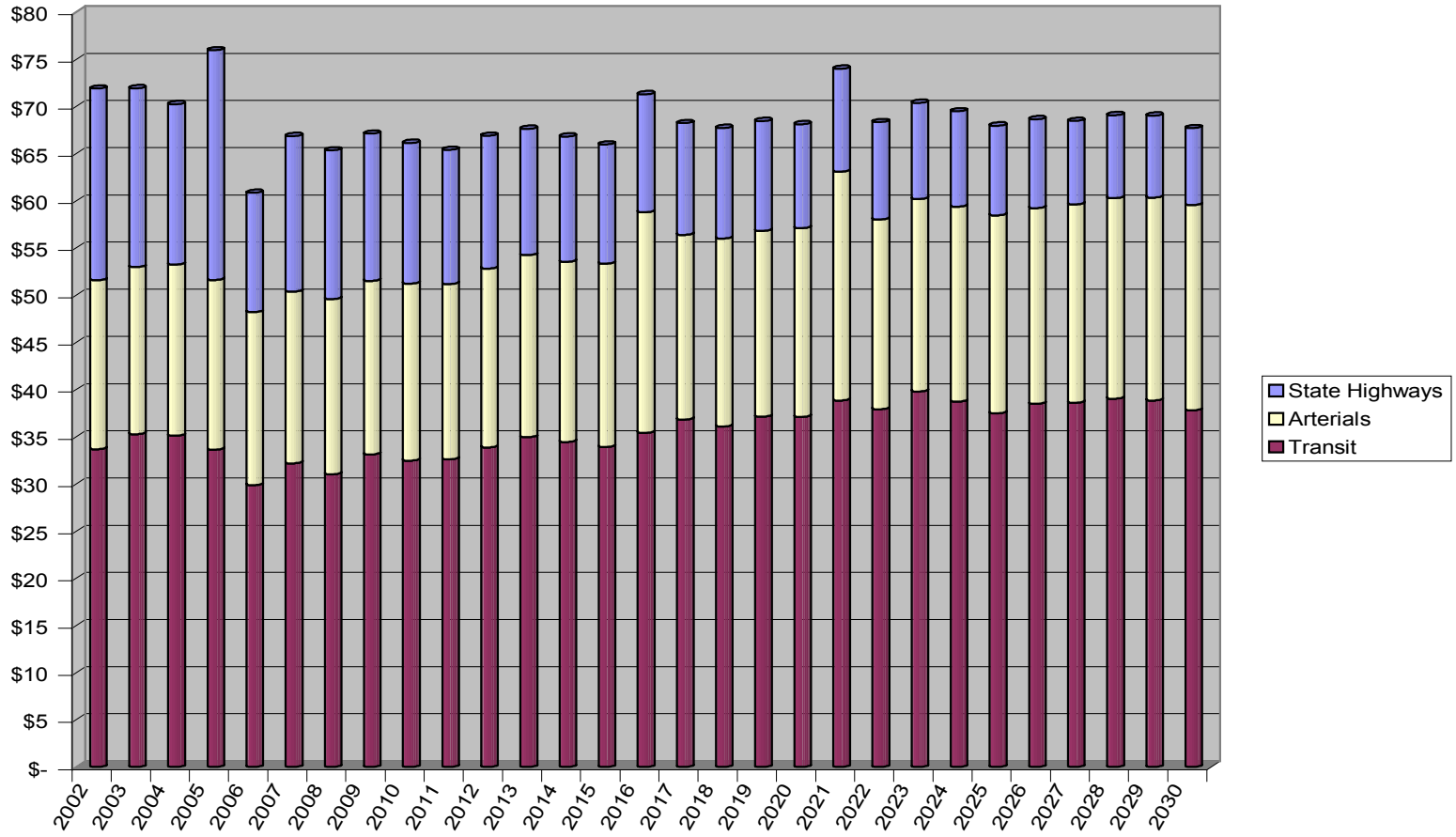
THE RESULTS DO NOT REFLECT NEEDS. THEY DO REFLECT THE EXPENDITURES BASED ON CURRENT PLANS AND REVENUE TRENDS.

Annual State highway system preservation ranges between $13 and $24 per capita, but at this time, is projected to decline over time



THE RESULTS DO NOT REFLECT NEEDS. THEY DO REFLECT THE EXPENDITURES BASED ON CURRENT PLANS AND REVENUE TRENDS.

Total preservation ranges between $60 and $75 per capita (per year)



THE RESULTS DO NOT REFLECT NEEDS. THEY DO REFLECT THE EXPENDITURES BASED ON CURRENT PLANS AND REVENUE TRENDS.

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Sustainability Discussion

Sustainability reflects the costs per capita to maintain overall system performance

- Current performance needs to be finalized, especially in terms of:
  - Accessibility
  - Delay
  - Environmental
  - Safety
- Other performance measures such as reliability and productivity cannot be forecasted yet
- To date, we only have estimates for Baseline and Tier 2 projects. We still need to add projects beyond Tier 2 (based on innovative financing conclusions), and then we have total plan costs.
- Once we have a plan and its costs and performance, we will likely need to add to it until we get the same performance as we calculated in 2000
- Once we get to such performance, we can calculate the costs per capita required to keep the system sustainable

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Scenario Performance Results

Preliminary Modeling Results: 3 Socioeconomic growth projections

- All 3 projections have the Trend regional total
- Trend/Local A
  - Trend distribution at the county level, Local Input distribution at all levels below county
- Trend/TBGP
  - TBGP distribution at county level and below
- Trend/TBGP modified
  - modified TBGP distribution at county level and below

Preliminary Modeling Results: Transportation Infrastructure

- 2000 Base Year - current conditions
- 2030 Baseline - "do-nothing" scenario
  - 2002 RTIP projects with NEPA clearance by Dec. 2002
  - For RTP performance analysis, including conformity
  - CEQA No Project
- 2030 Tier 2 - remaining RTIP, other projects
  - Committed, programmed projects not in Baseline
  - Included in every RTP/EIR alternative

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Mobility Results

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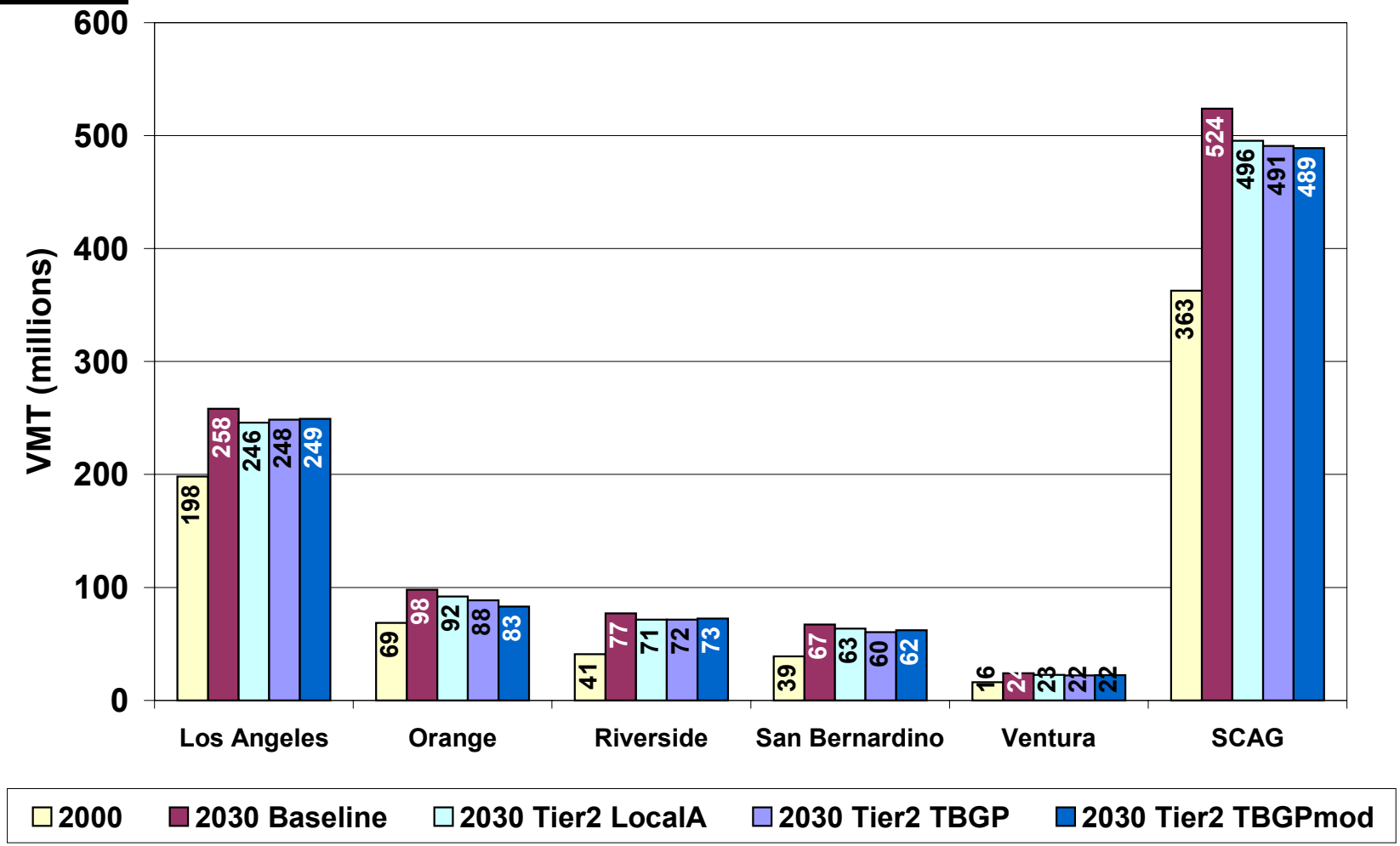
Total Daily Vehicle Miles of Travel (VMT)



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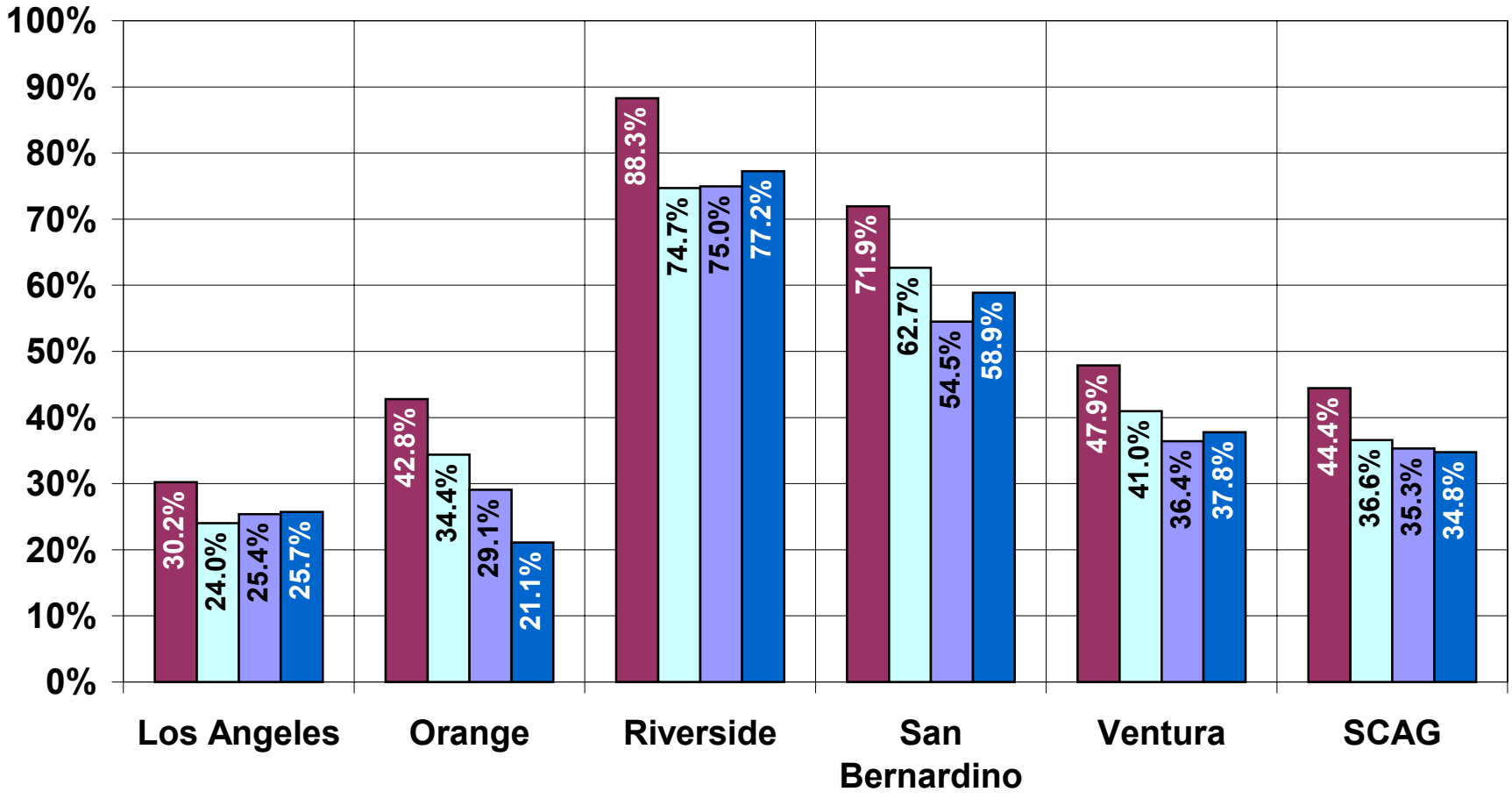
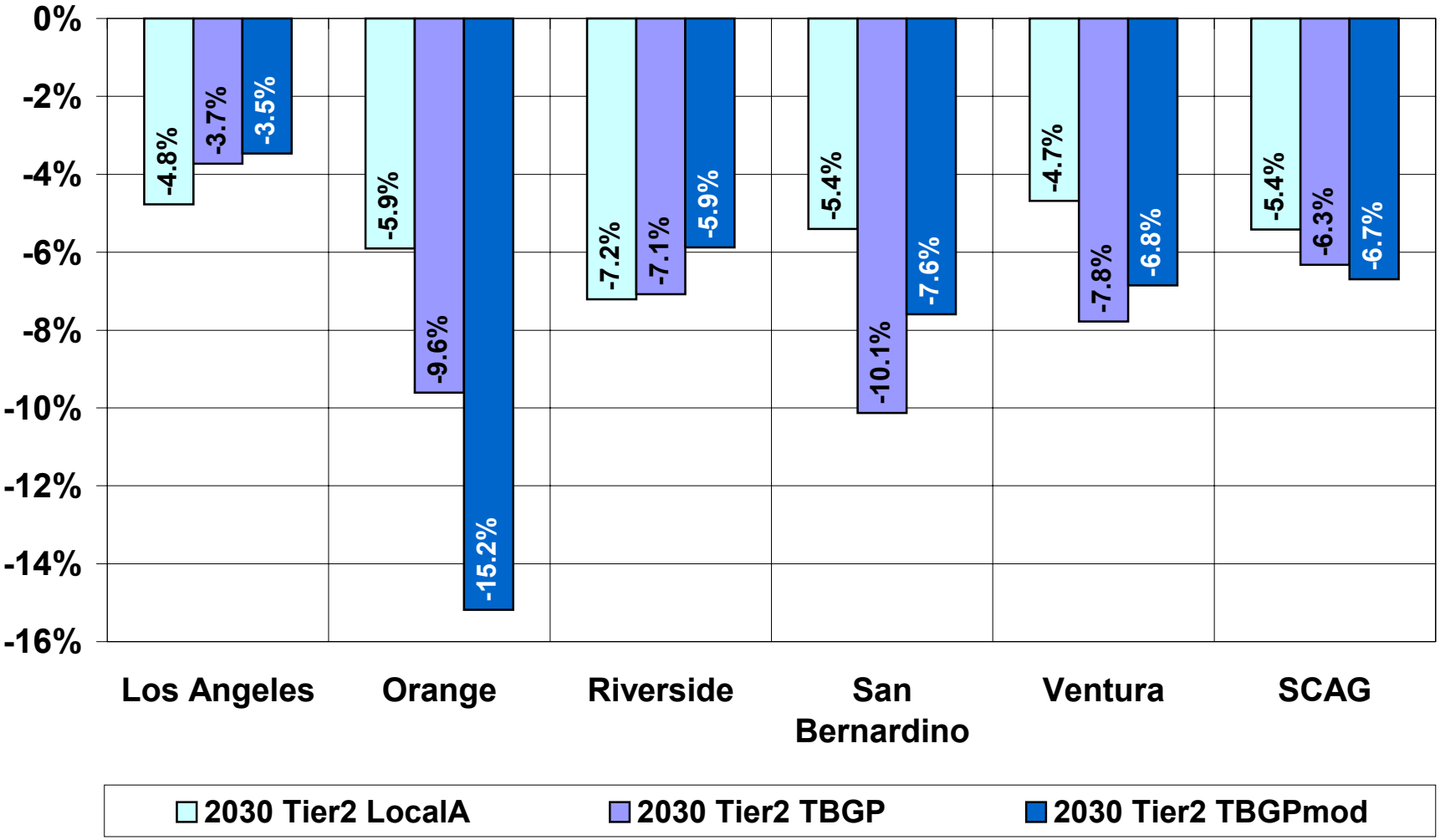
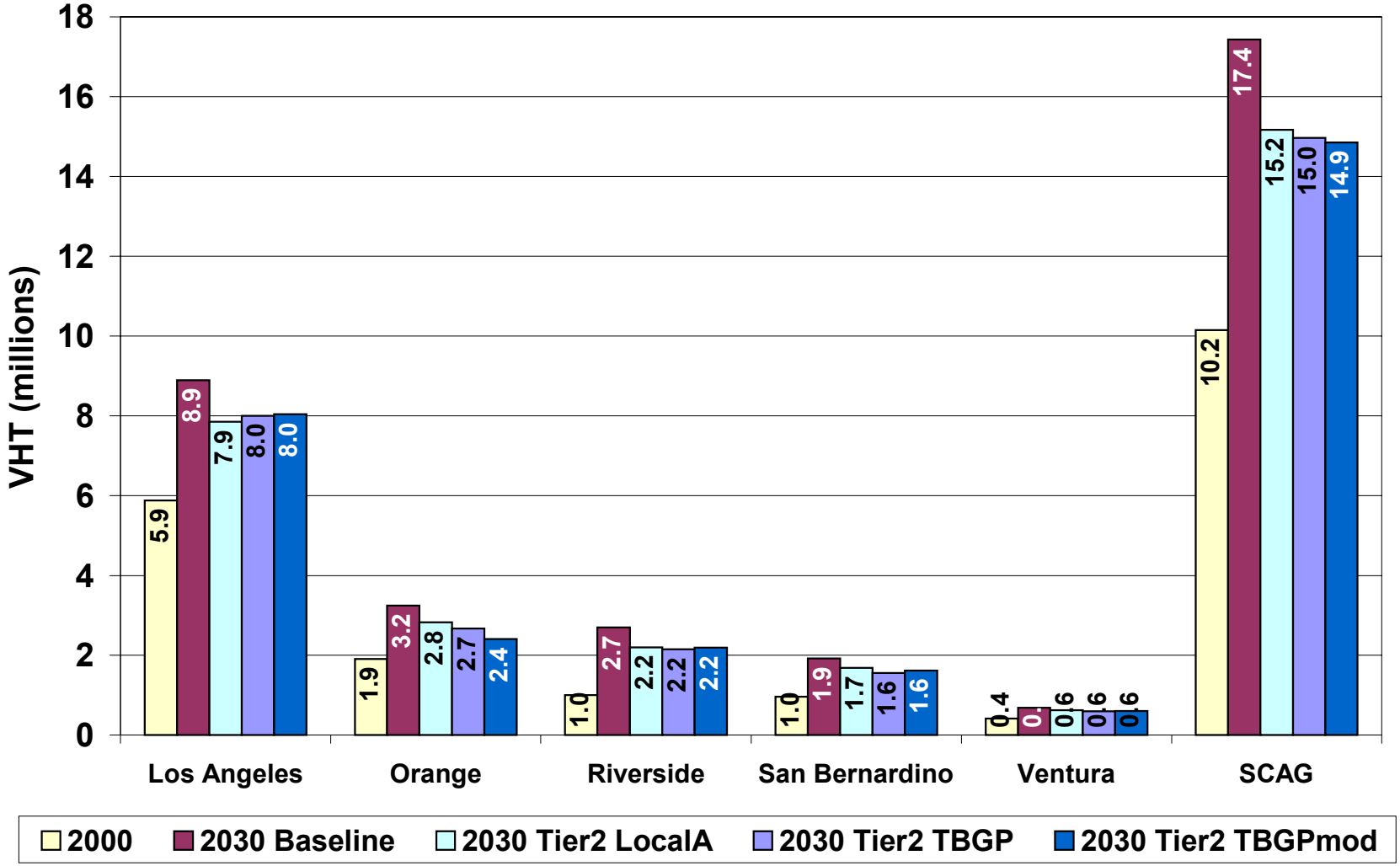
Daily VMT Increases from 2000



Daily VMT Decreases from 2030 Baseline



Total Daily Vehicle Hours of Travel (VHT)



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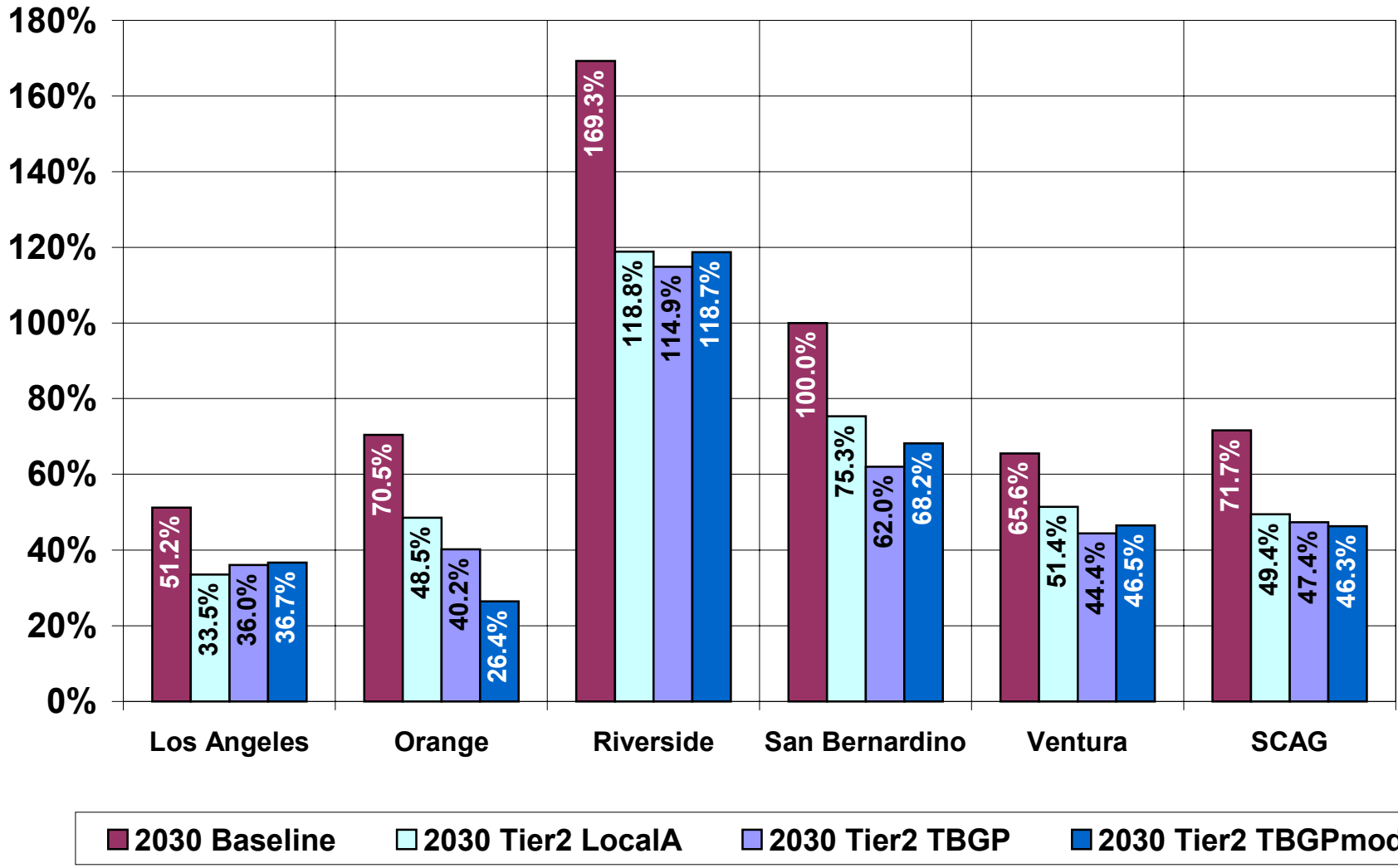
Daily VHT Increases from 2000



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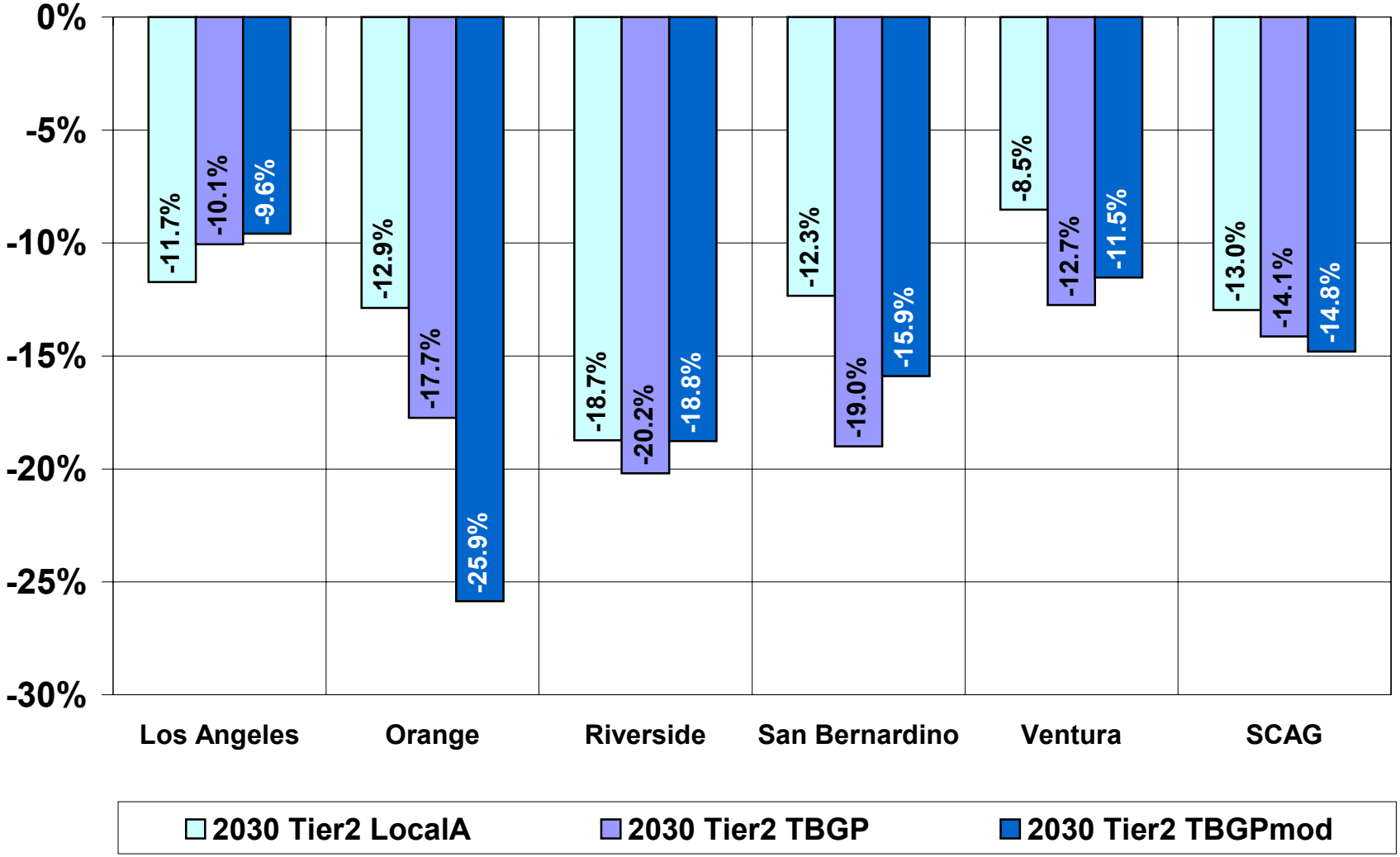
Daily VHT Decreases from 2030 Baseline



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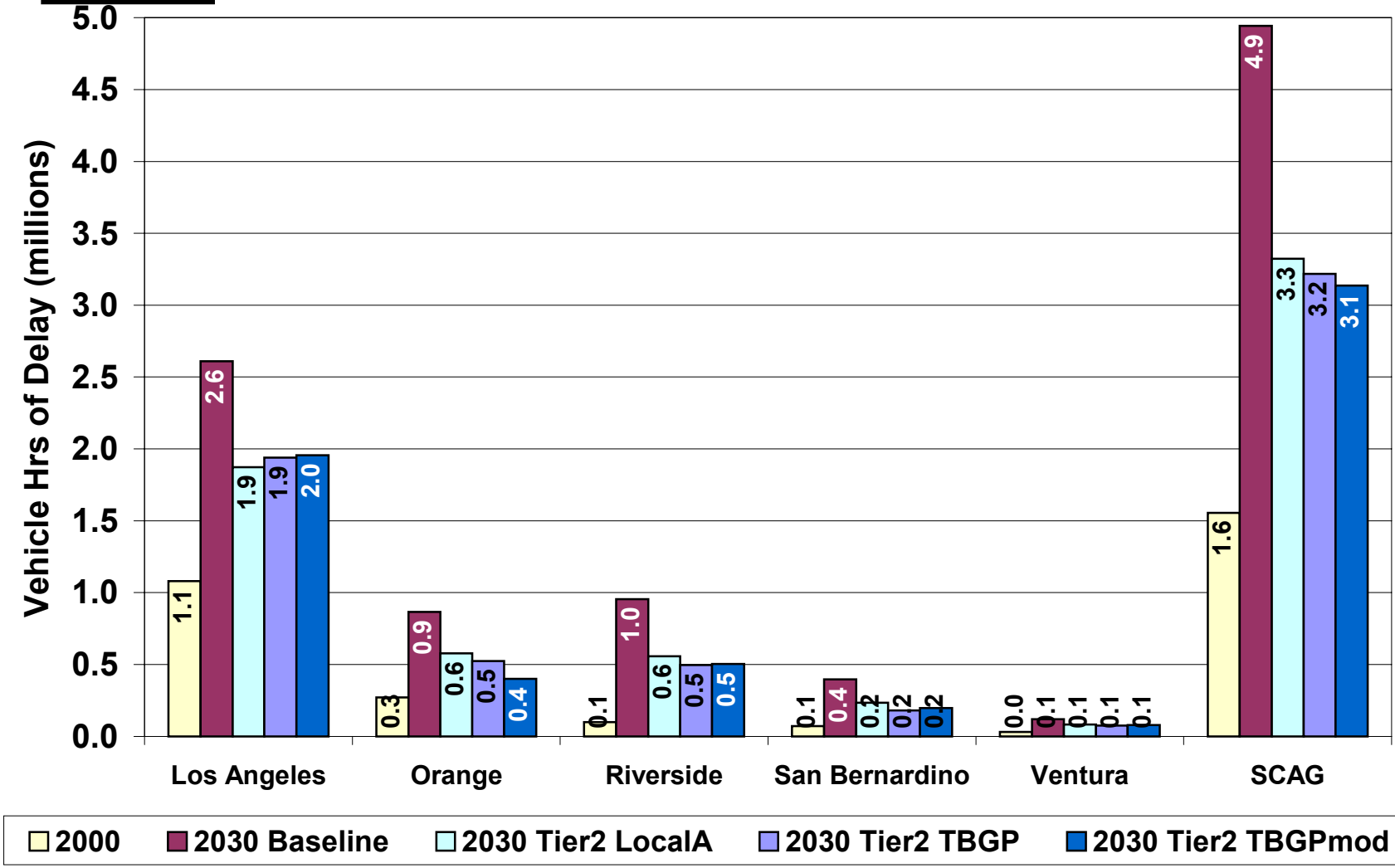
Total Daily Vehicle Hours of Delay



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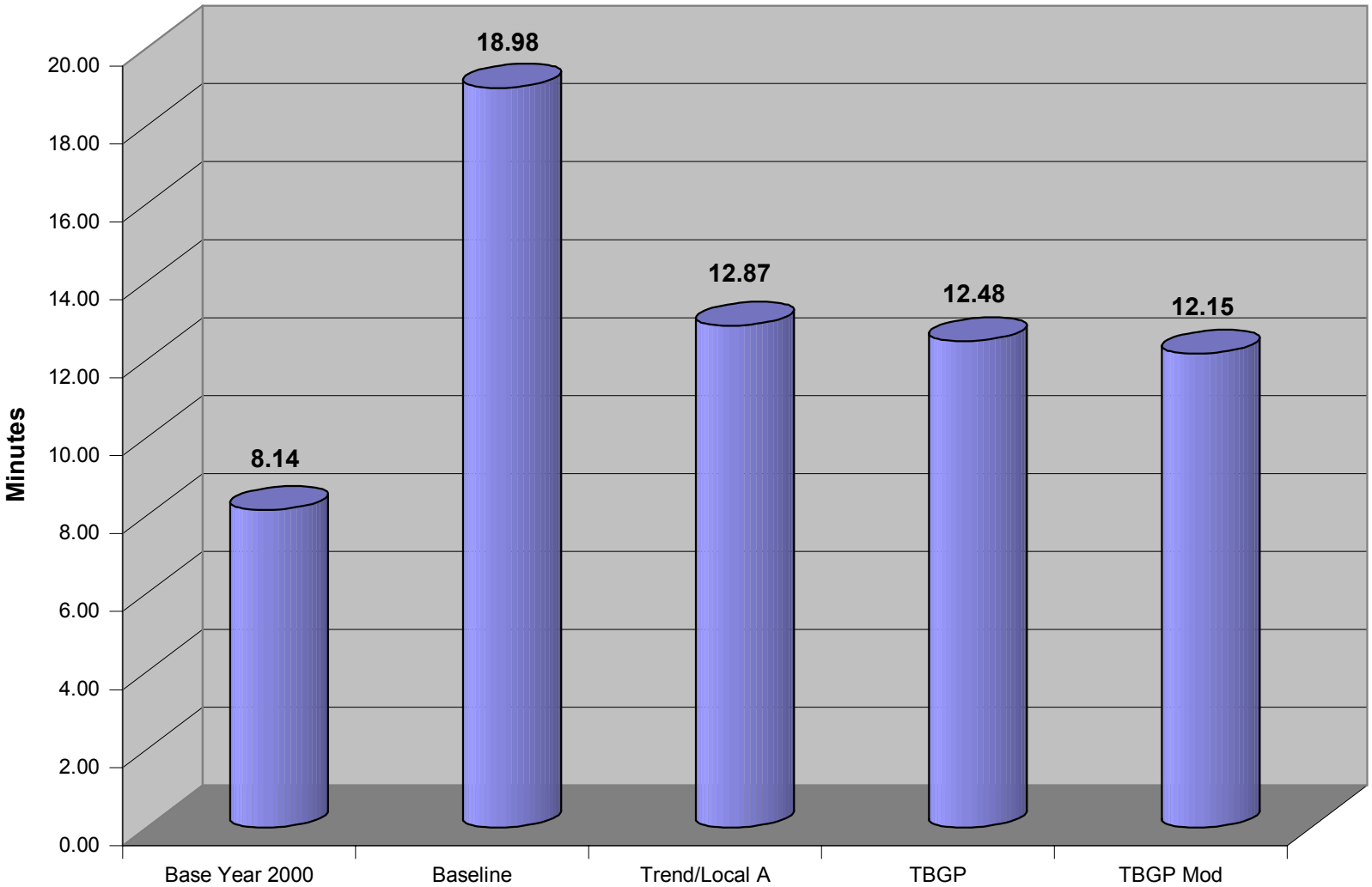
Even though total delay almost doubles for all Tier 2 scenarios, delay per capita rises by a more modest 50 percent



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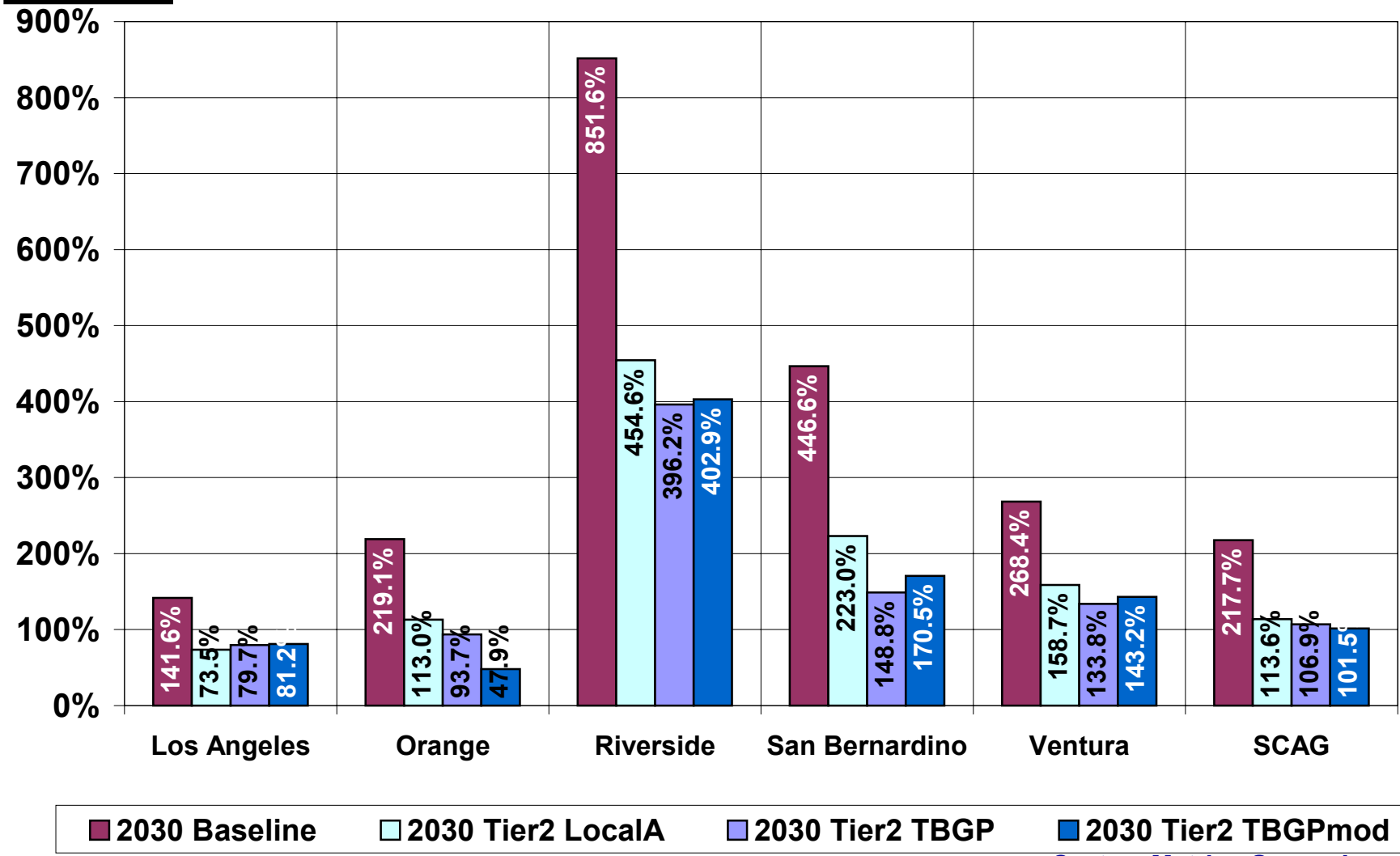
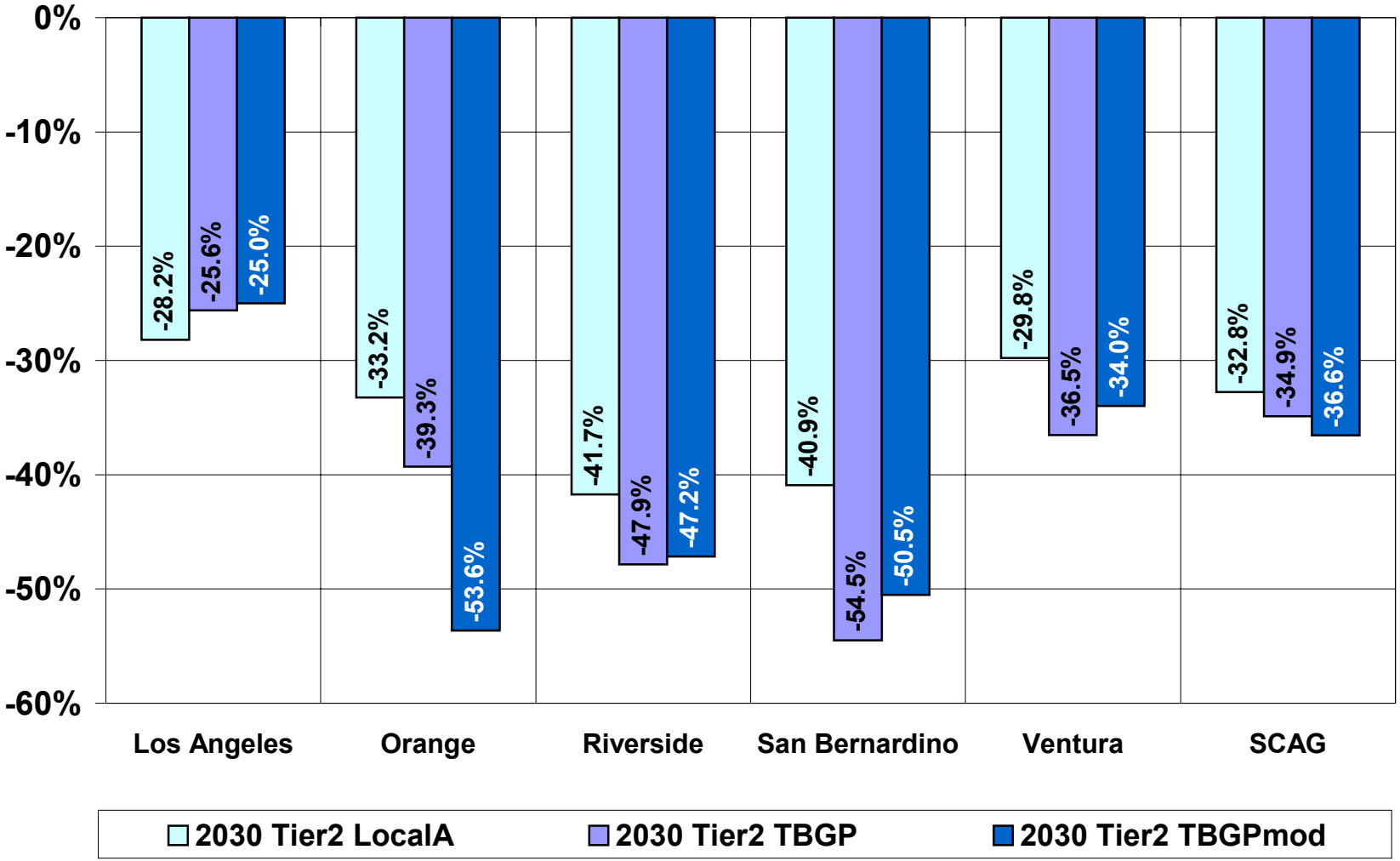
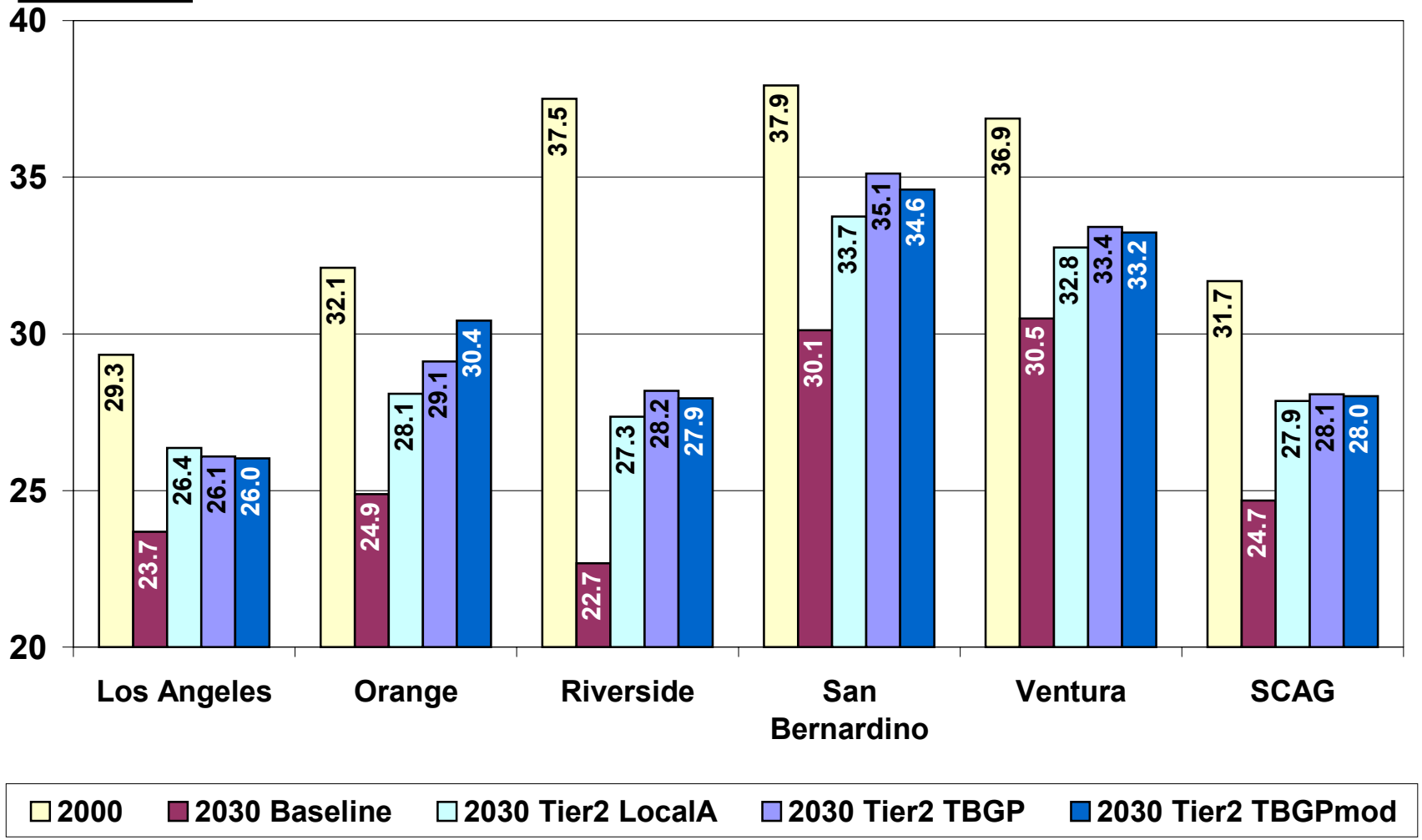
Daily Delay Increases from 2000



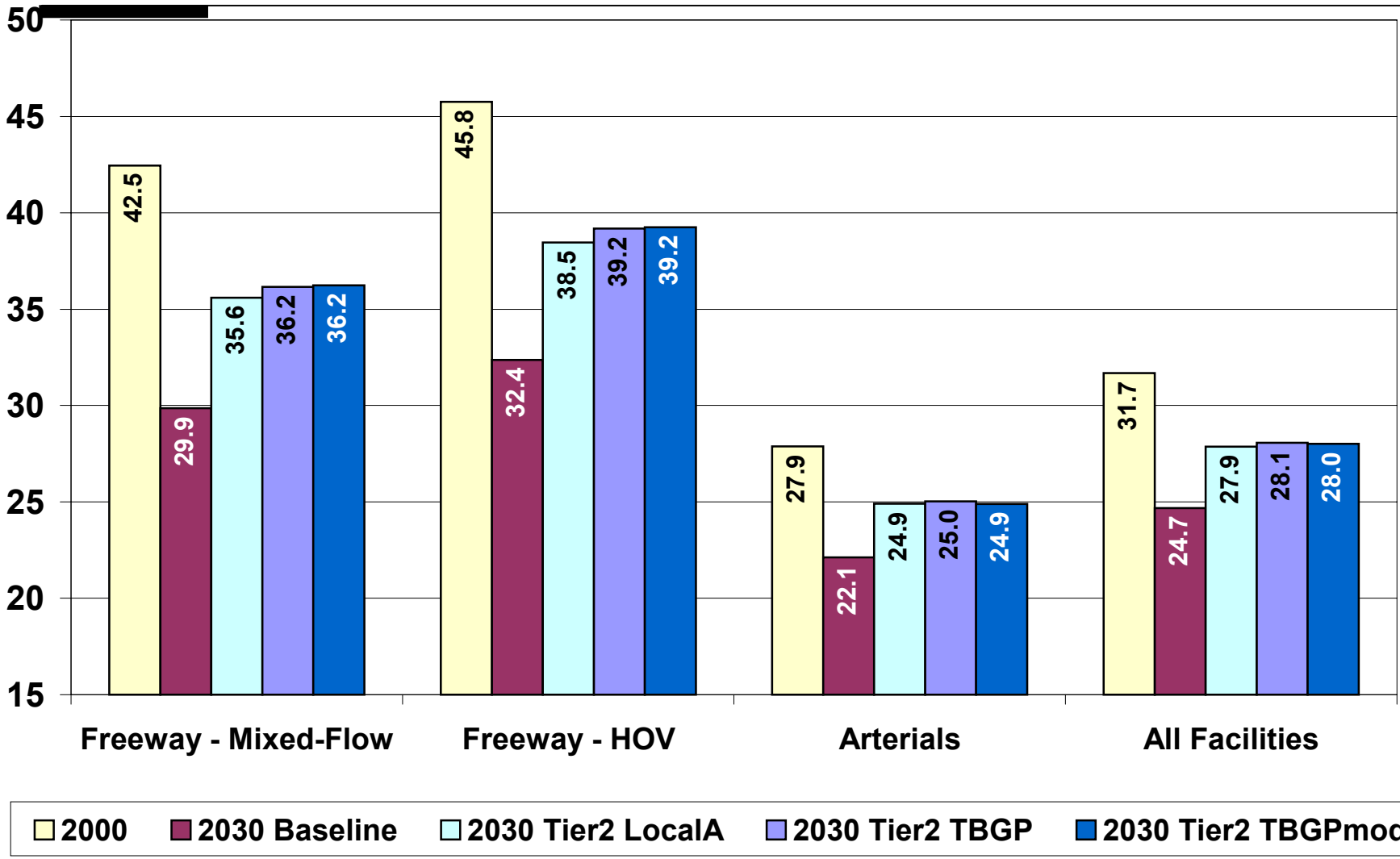
Daily Delay Decreases from 2030 Baseline



PM Peak Average Speed (mph), All Facilities



PM Peak Average Speed by Facility Type



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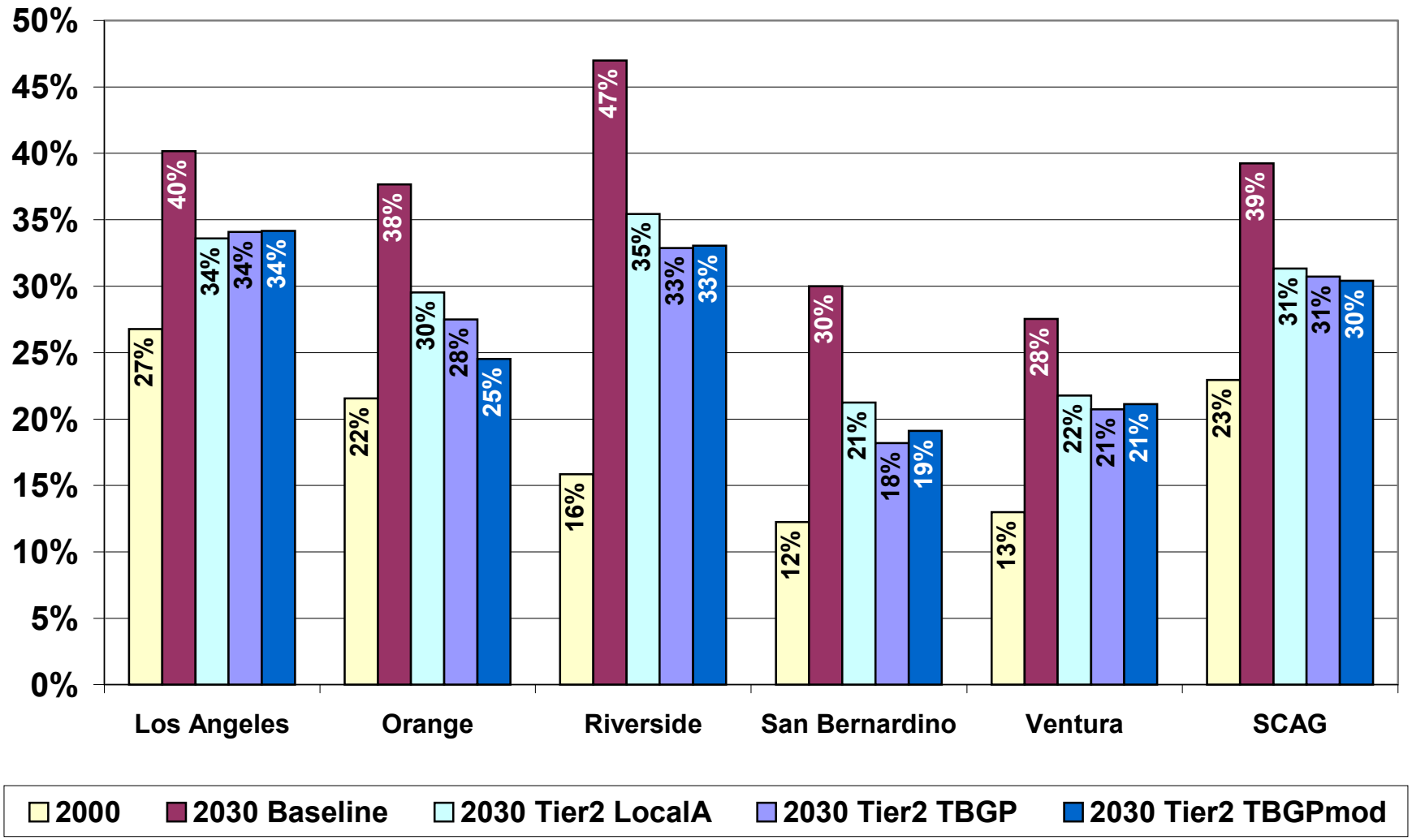
PM Peak Travel in Delay



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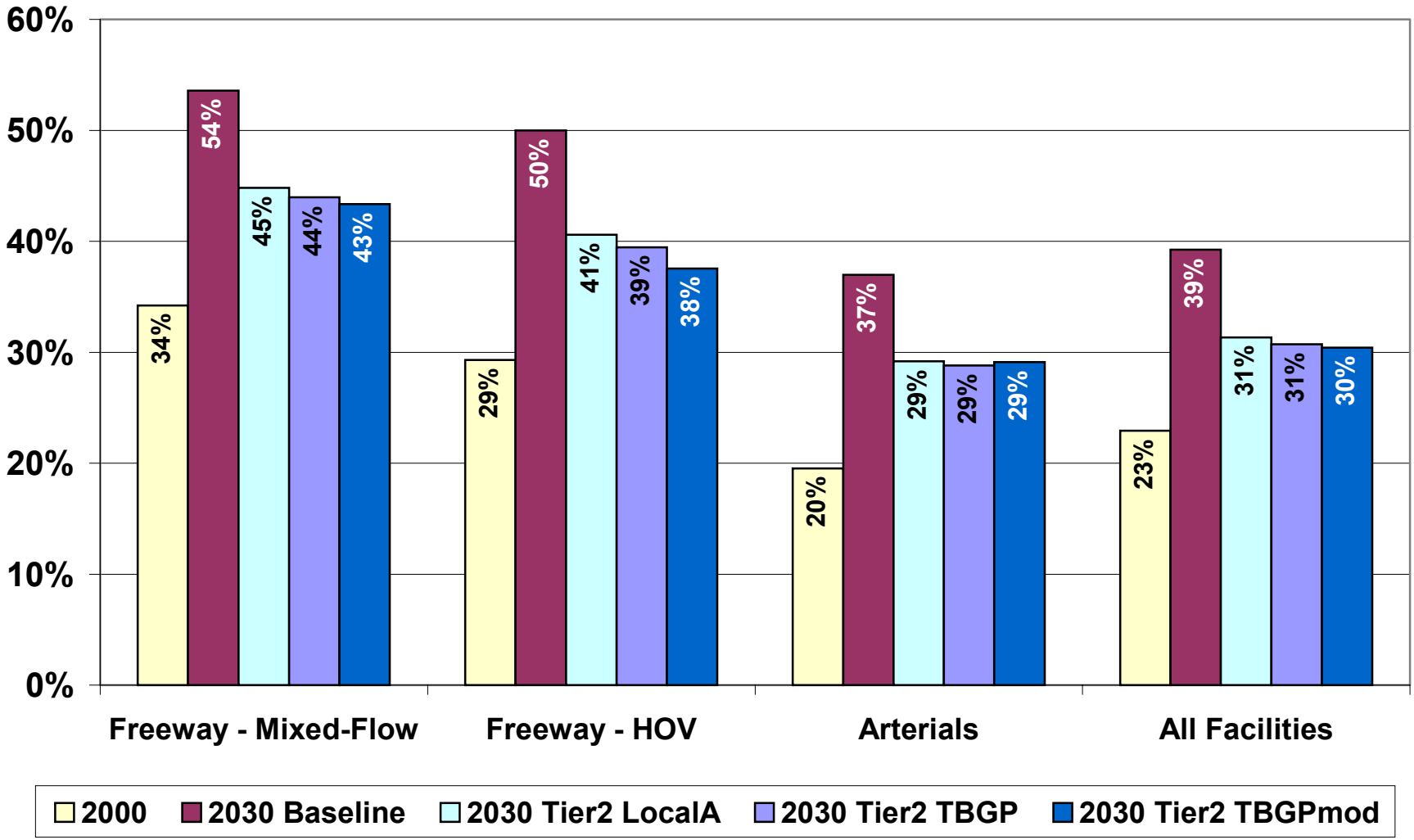
PM Peak Travel in Delay by Facility Type



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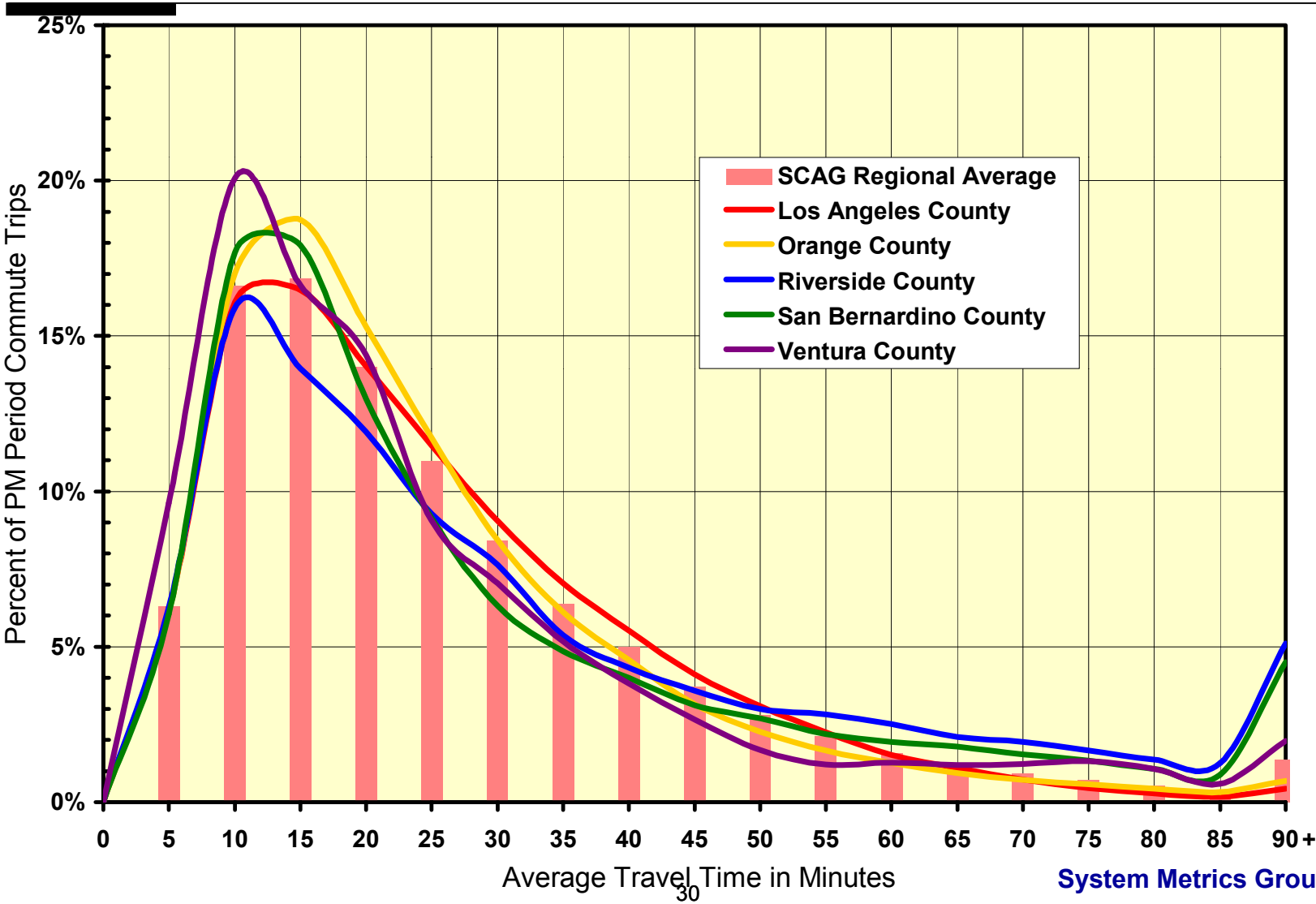
Accessibility Results

Accessibility for autos by county and for SCAG in 2000 summarized by destination



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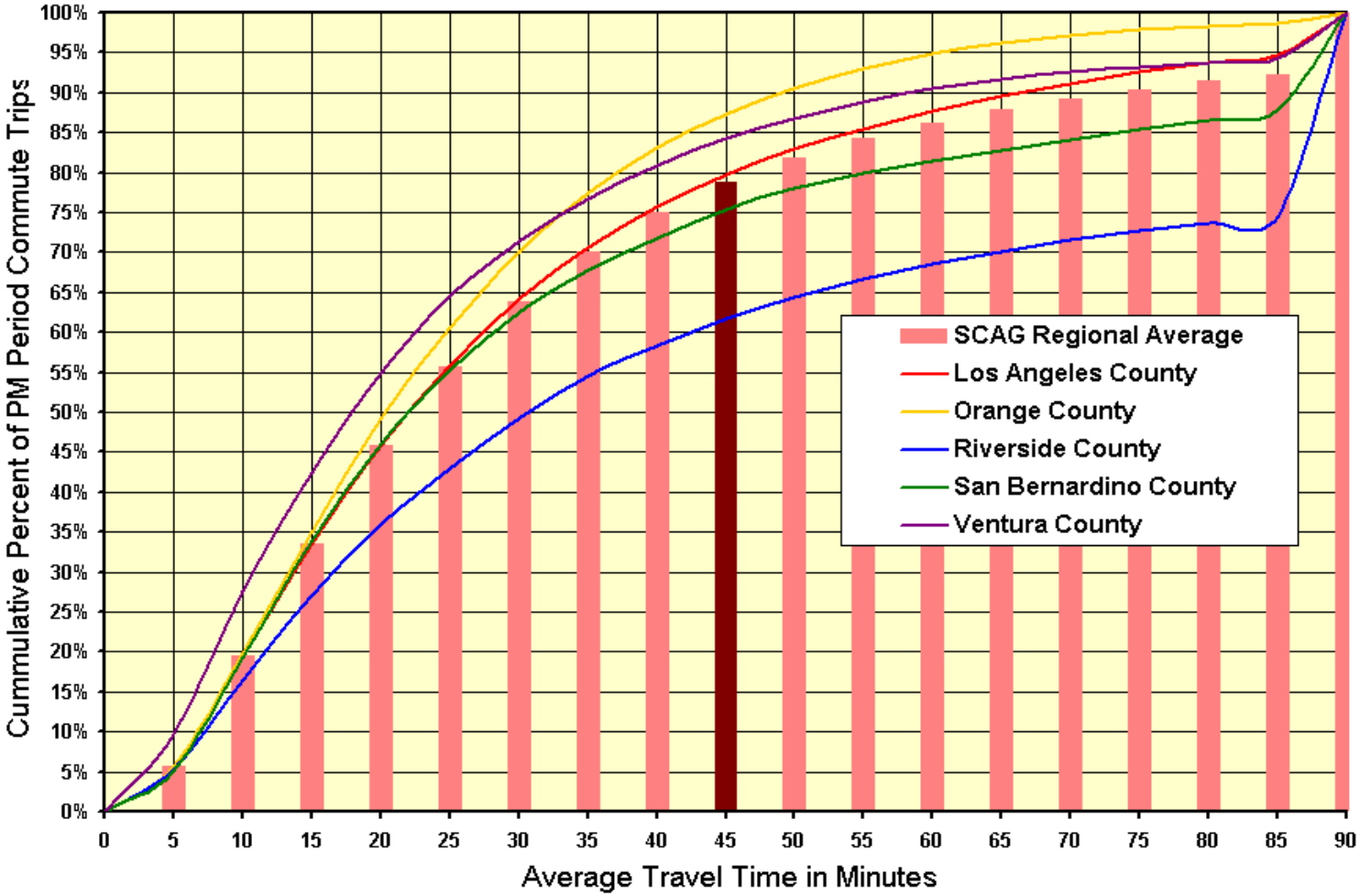
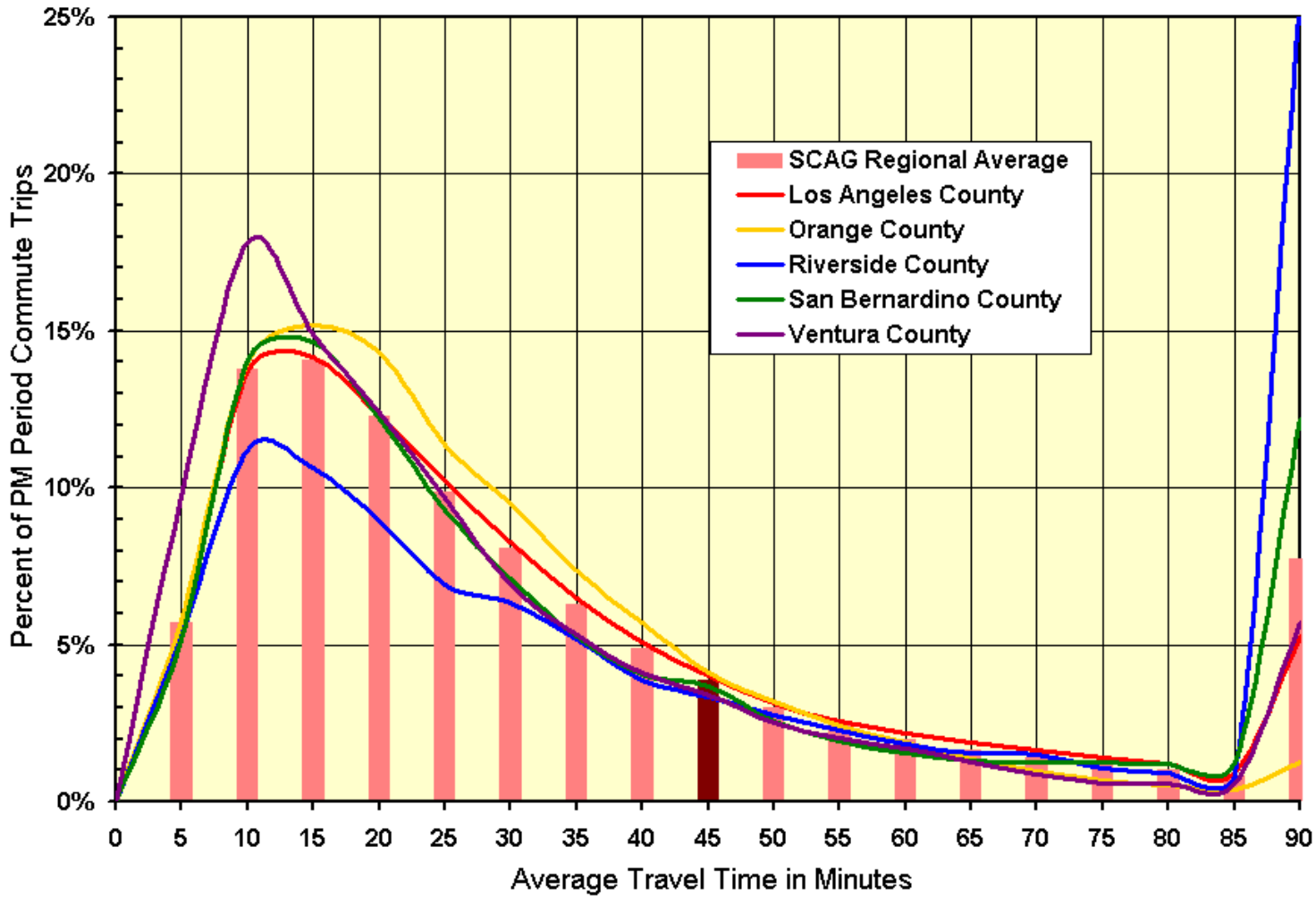
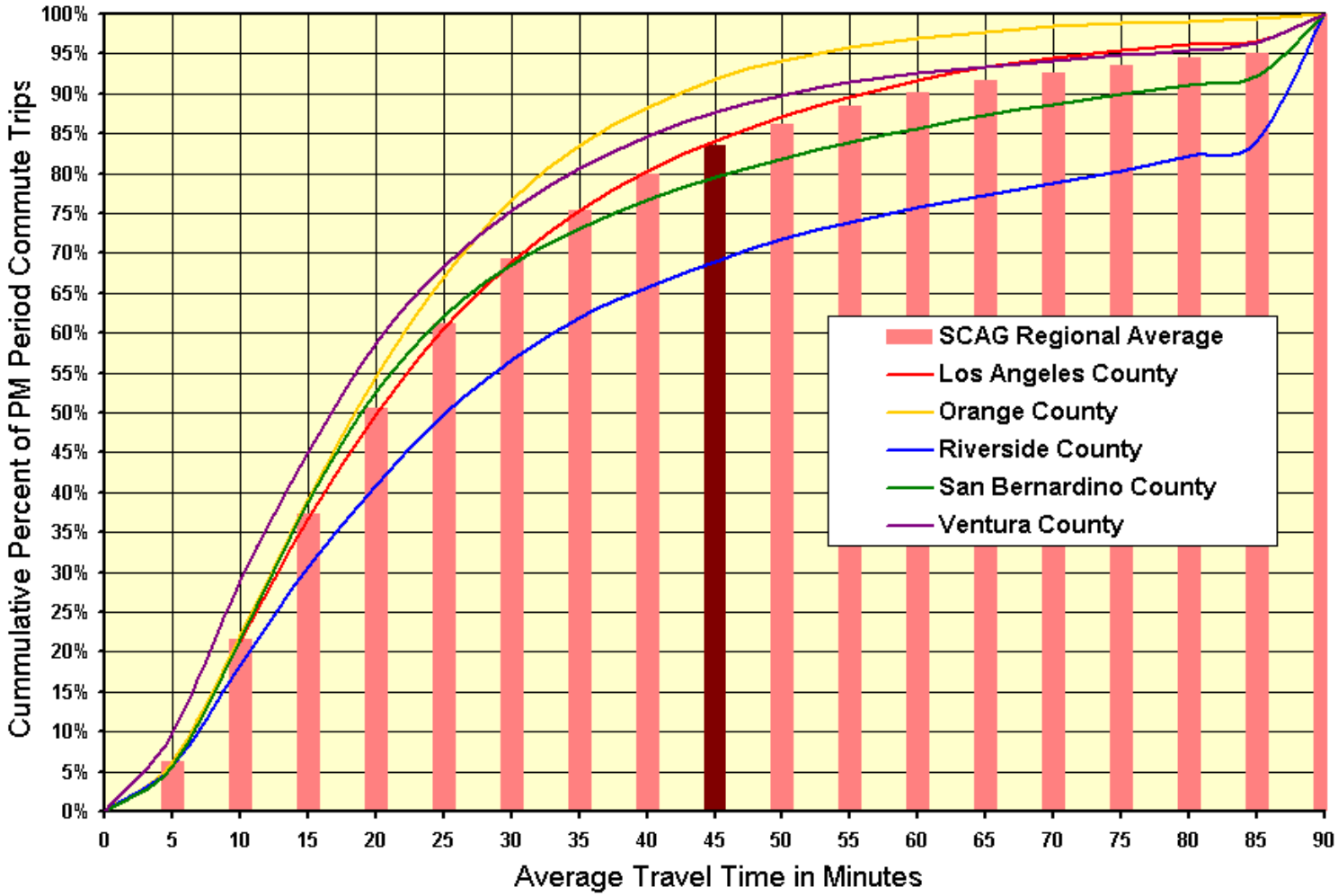
Accessibility analysis for the Baseline 2030 Scenario shows that 79% of auto trips occur within 45 minutes (compared to 88% in 2000)



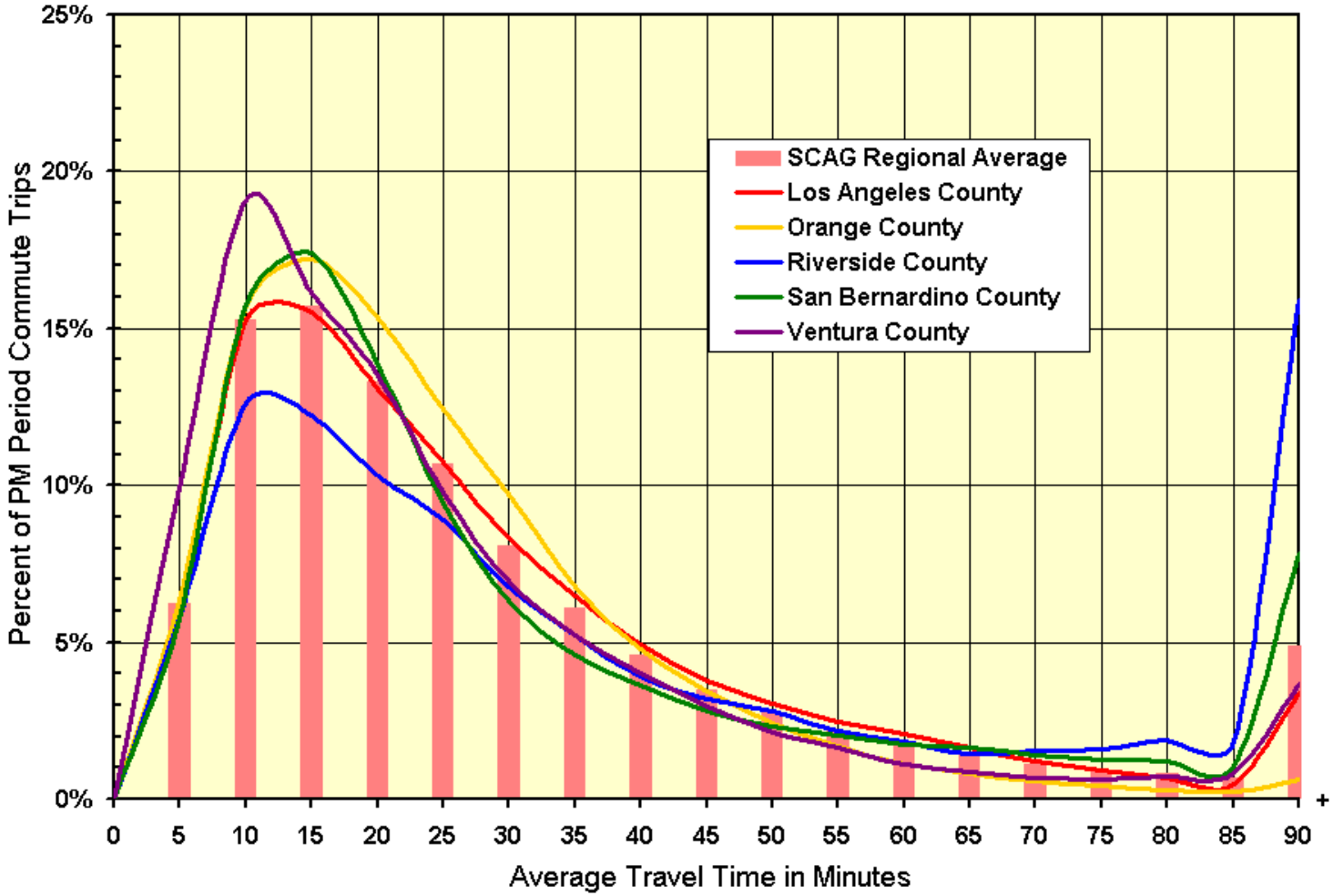
With trips destined to Riverside and San Bernandino showing significant increases at the 90+ minutes range



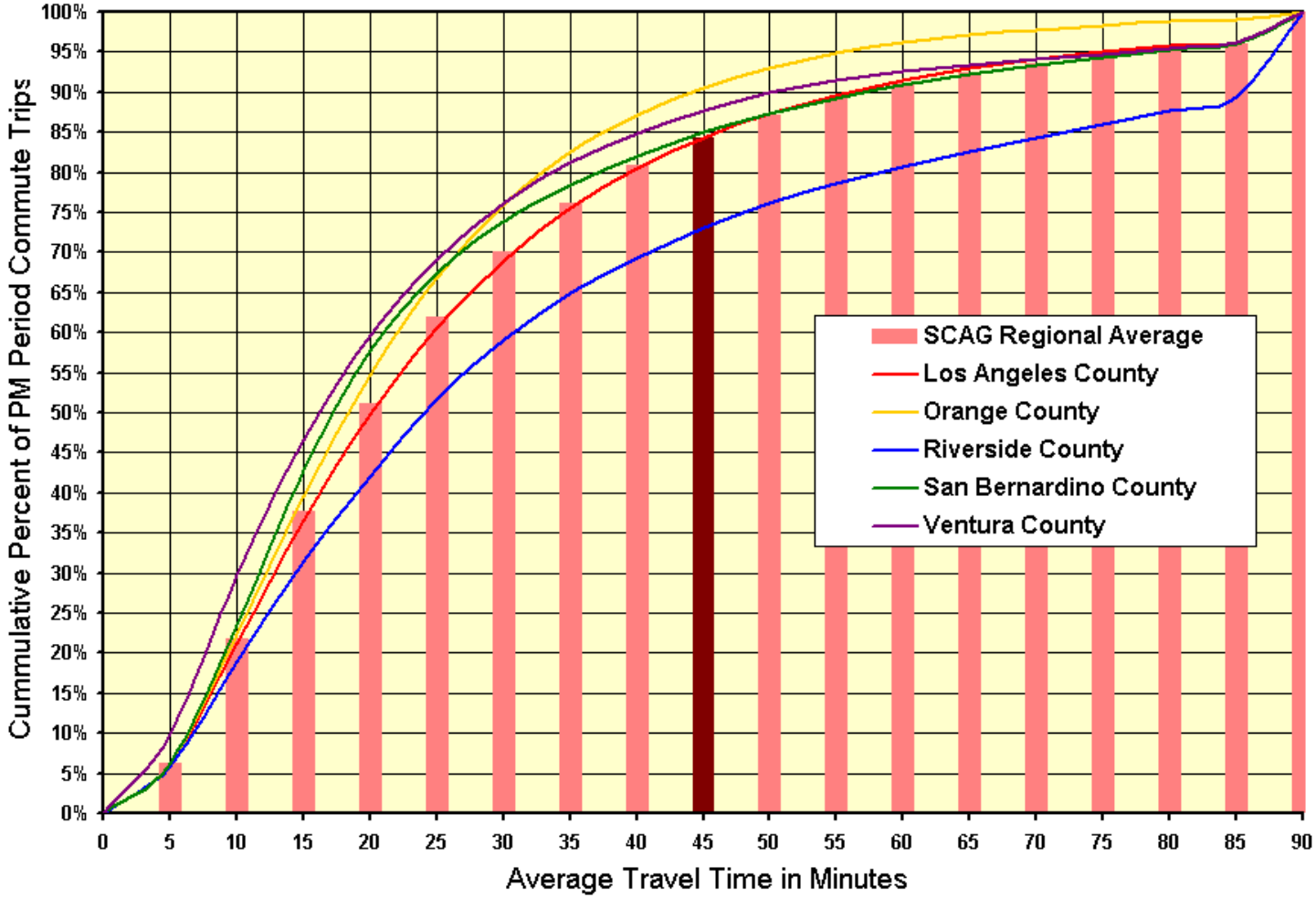
Accessibility analysis for the Trend/Local A Tier 2 2030 Scenario shows that 83% of auto trips occur within 45 minutes (compared to 79% for the Baseline)



With trips destined to Riverside show more than 10% in the 90+ minute range



Accessibility analysis for the Trend/TBGP Tier 2 2030 Scenario shows that 84% of auto trips occur within 45 minutes (compared to 79% for the Baseline)



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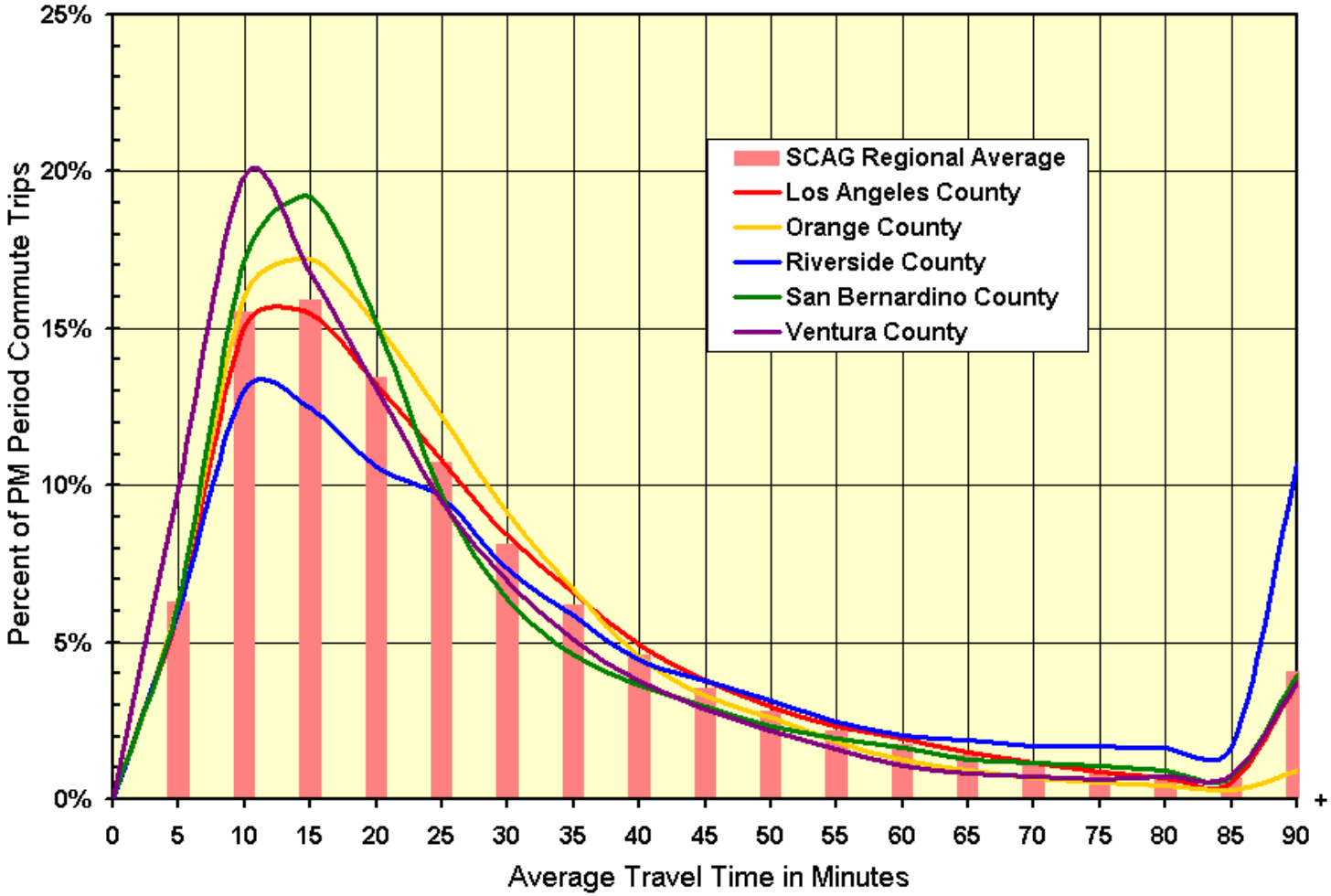
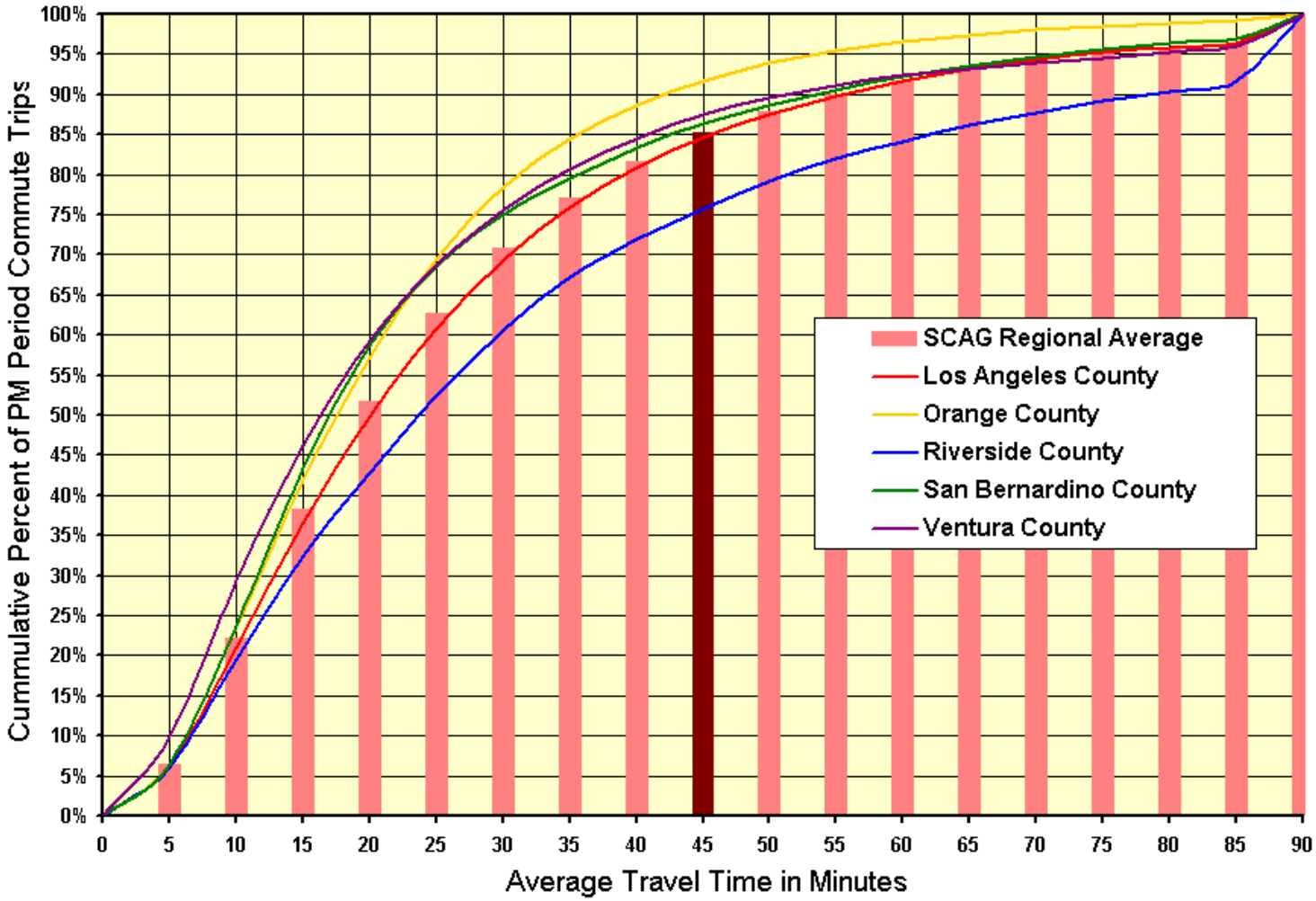
With trips destined to Riverside still the only ones showing more than 10% or 5% in the 90+ minute range



Accessibility analysis for the Trend/TBGP Modified Tier 2 2030 Scenario shows that 85% of auto trips occur within 45 minutes (compared to 79% for the Baseline)



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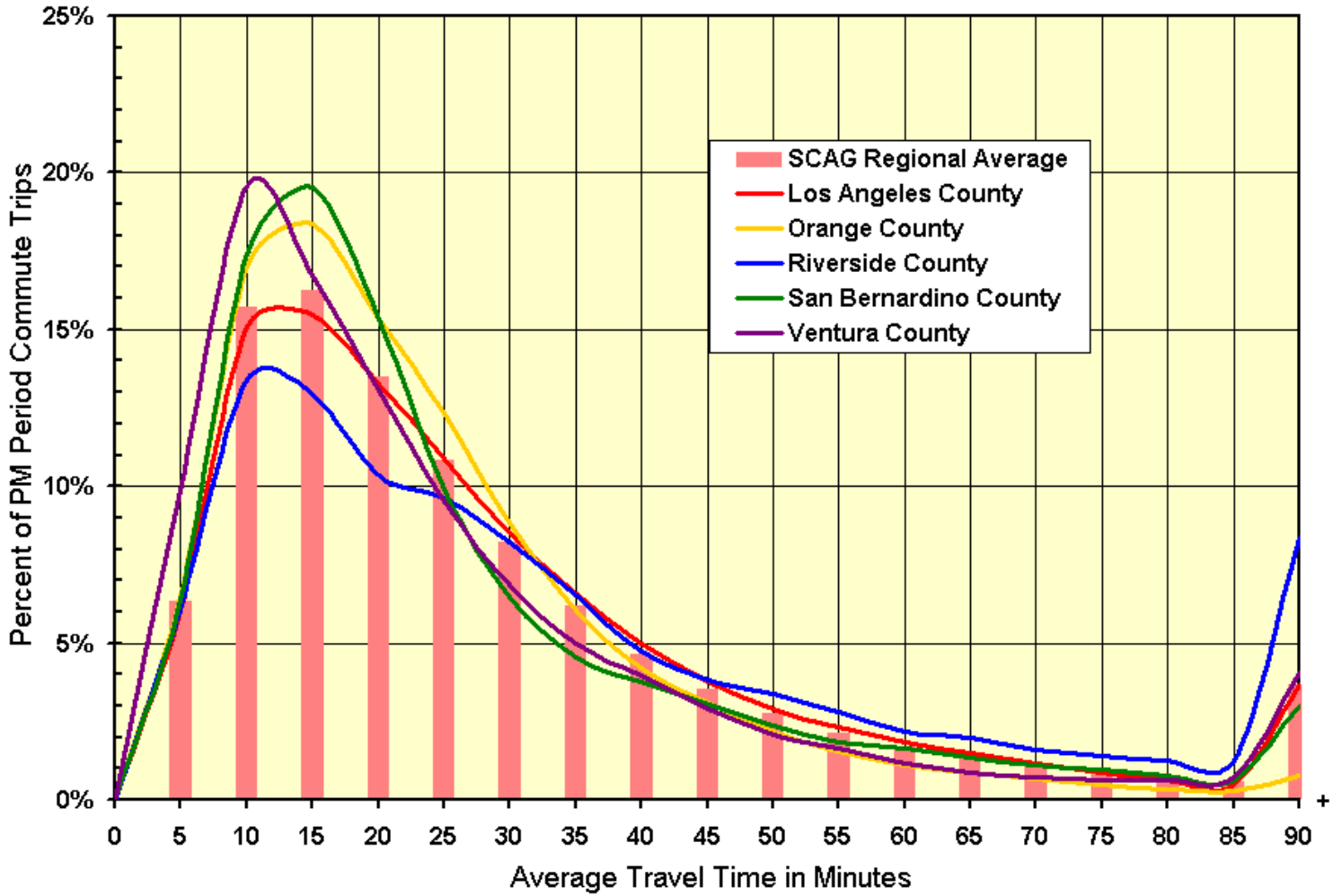
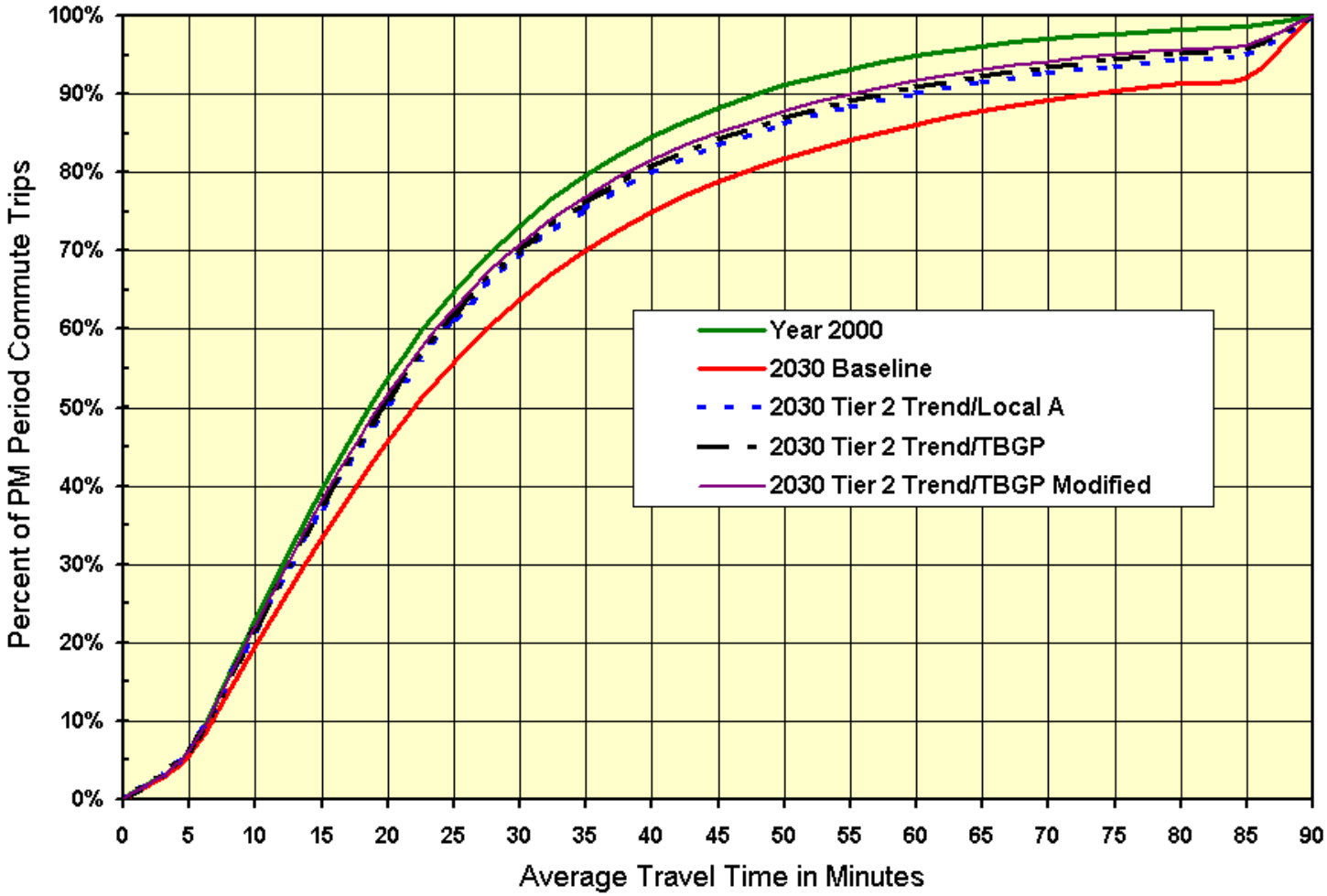
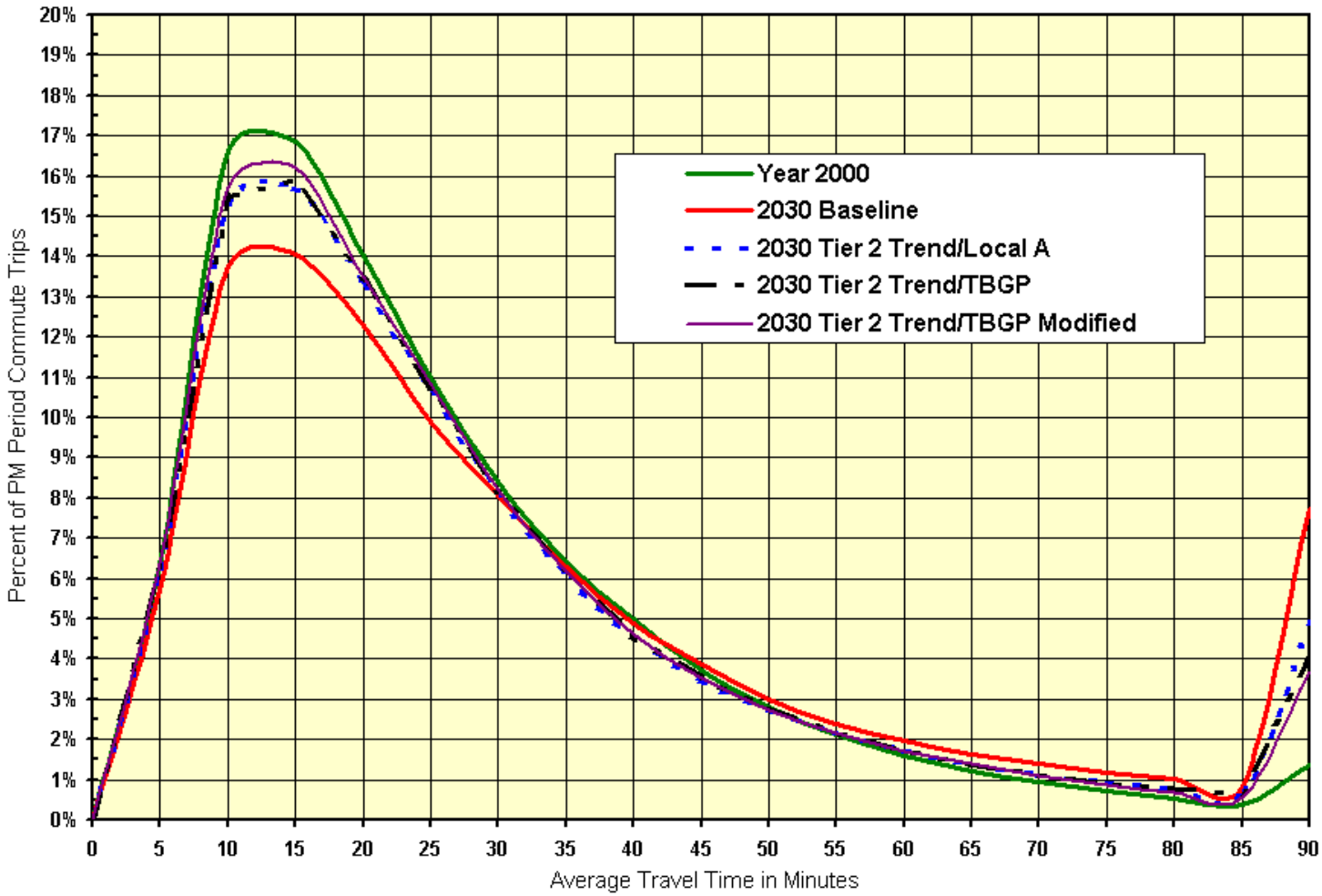
Again, with trips destined to Riverside being the only ones with more than 5% in the 90+ minute range



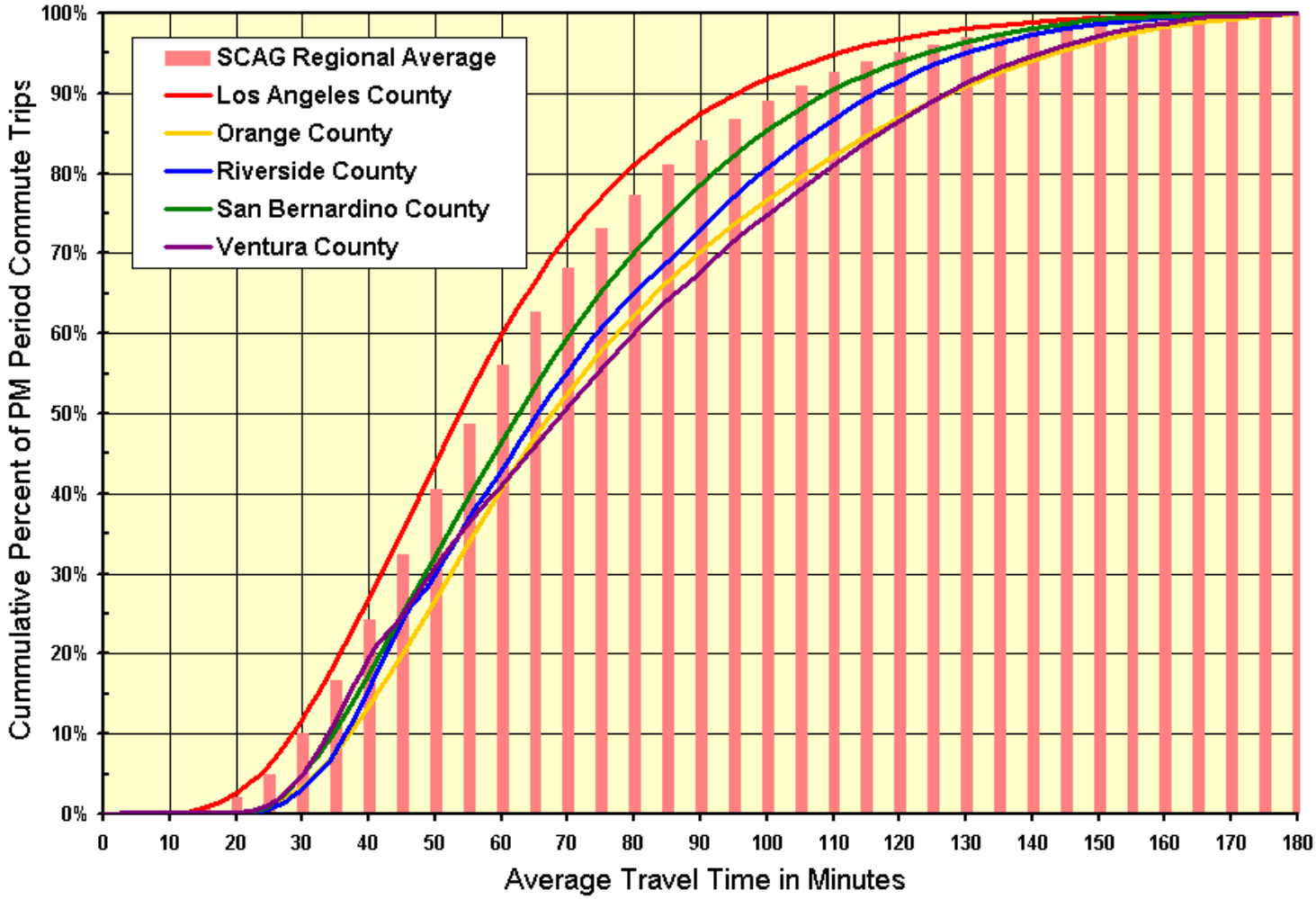
Accessibility analysis shows improvements in accessibility for all Tier 2 scenarios



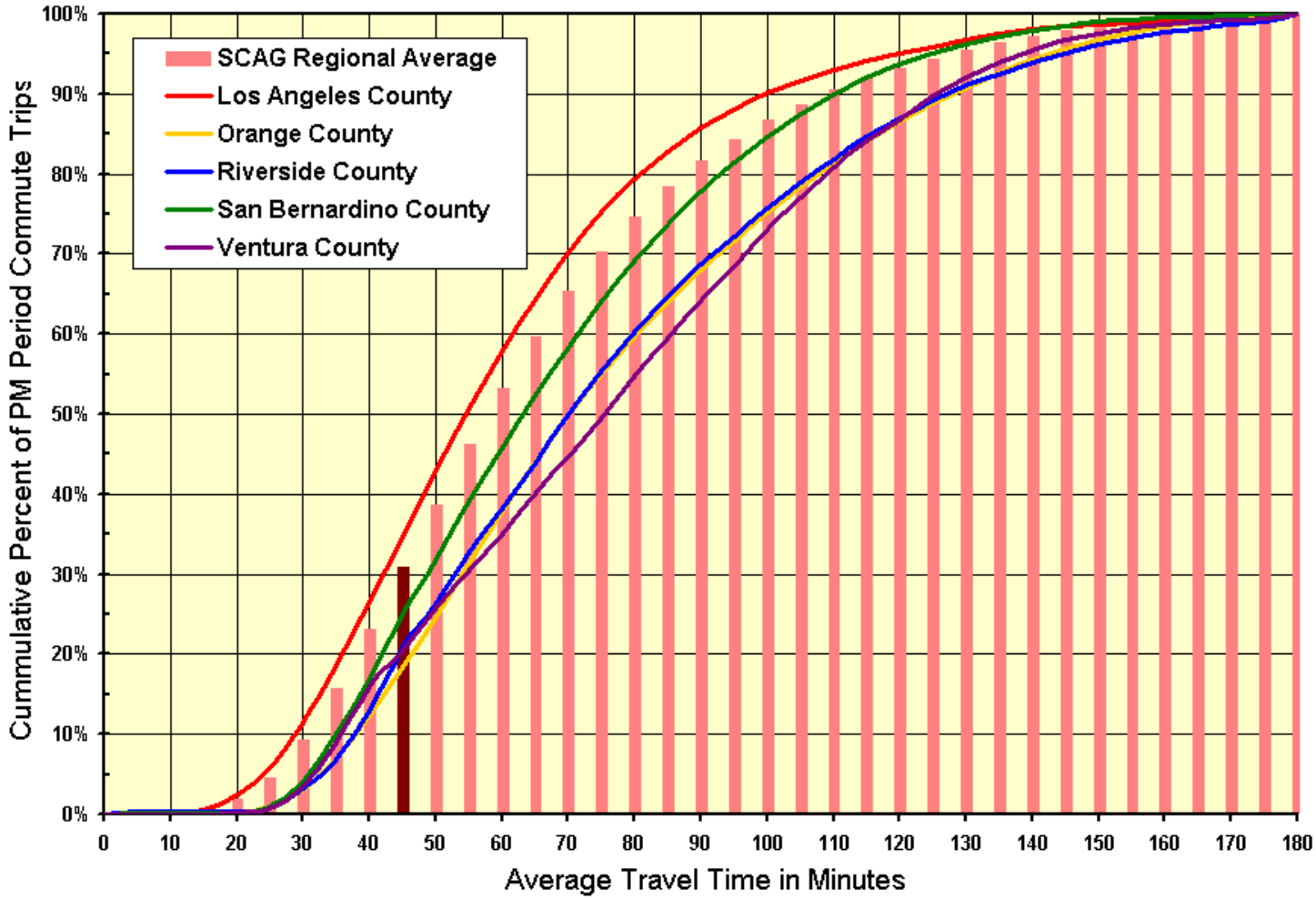
With Trend/TBGF and Trend/TBGF Modified showing better results, especially at the tail of the distribution



Transit accessibility results for Base Year 2000



Transit accessibility results for the Baseline in 2030 show a slight reduction over base year 2000 (31% versus 32%)



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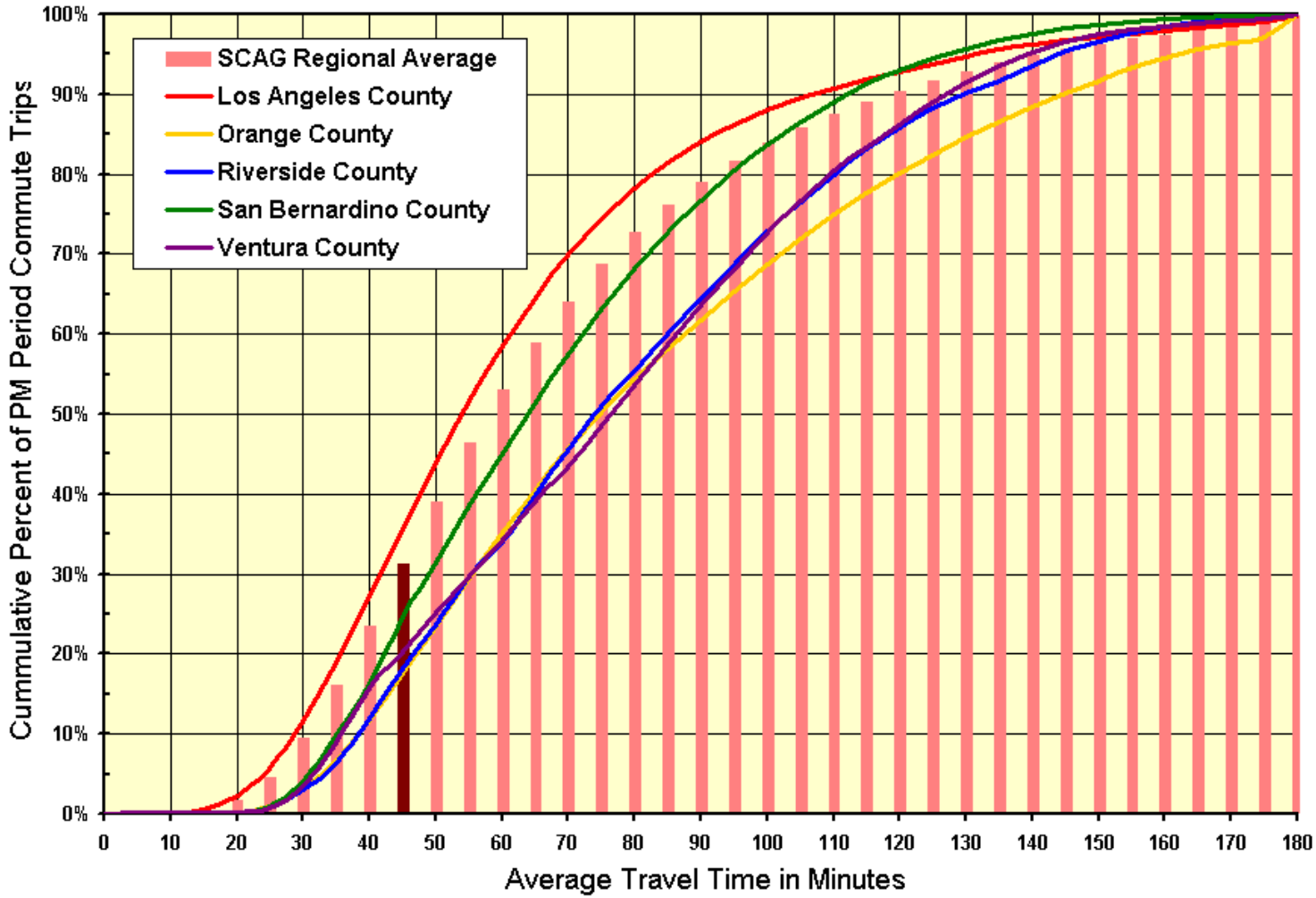
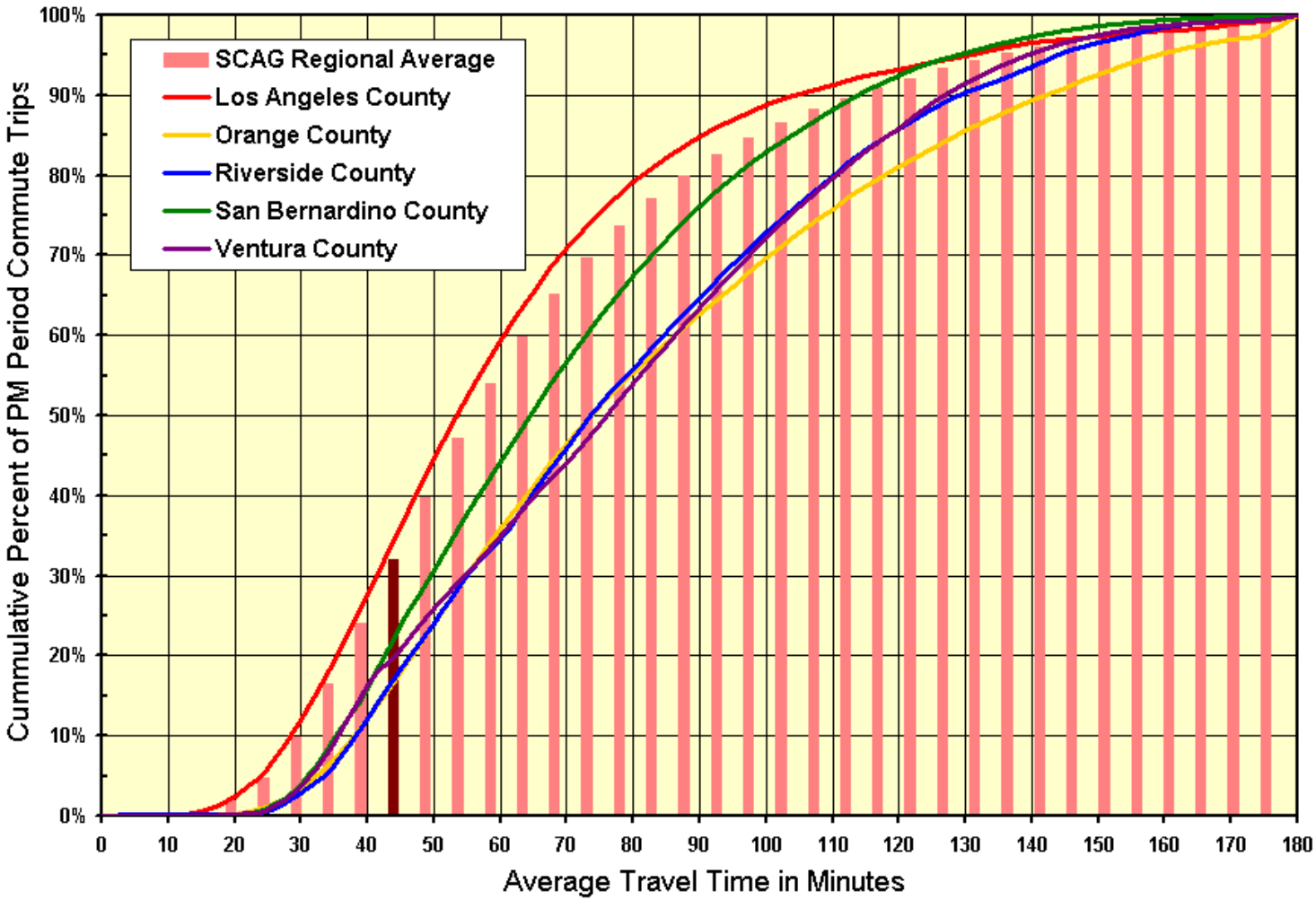
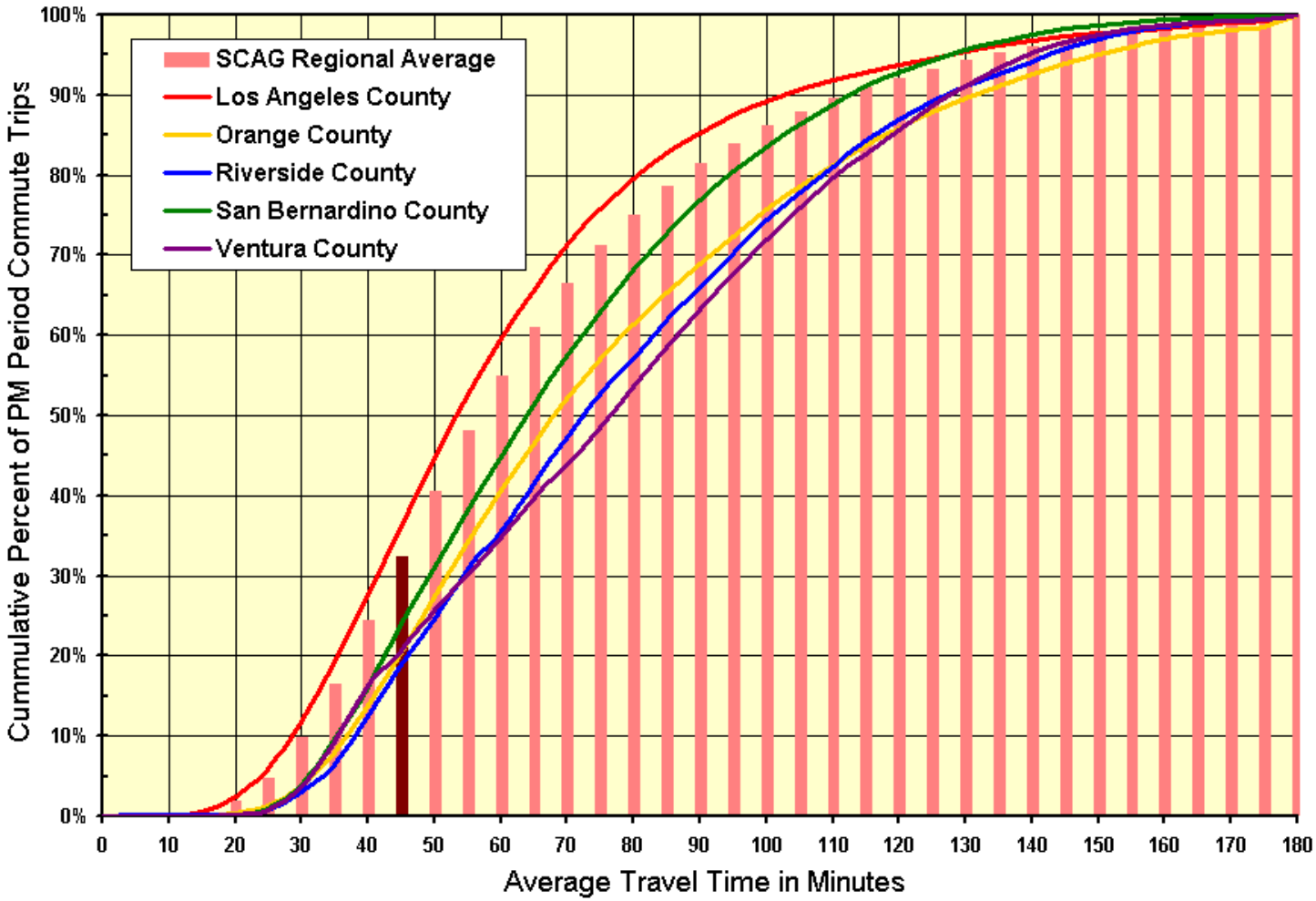
Transit accessibility results for the Trend/Local A Tier 2 in 2030 show no further improvements (31%)



The Trend/TBGP Tier 2 shows sustainable transit accessibility results (32% versus 32% in 2000)



The Trend/TBGP Modified Tier 2 also shows sustainable transit accessibility results (32% versus 32% in 2000)



Preliminary conclusions

- Accessibility for autos worsens in all future scenarios, although Tier 2 projects seem to reduce the longest trips (i.e., tail of the distributions) below 5% except for trips destined Riverside
- Transit accessibility does not deteriorate significantly, even for the Baseline scenario (i.e, without any Tier 2 projects)
- Trend/TBGP scenarios show sustainable accessibility results for transit region-wide.